Lecture
ON
HEREDITARY AND NON-HEREDITARY PHTHISIS.

Delivered in the Hospital for Consumption, Brompton, Feb. 1st, 1882,

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GENTLEMEN,—It falls to my lot to-day to inaugurate a new series of lectures which are to be given in this hospital on one day in the week, in order that those who wish to study pulmonary disease, and especially that form of disease to which this hospital is chiefly devoted—pulmonary consumption,—may have opportunities of seeing any special cases of interest which may from time to time occur in the hospital, and of hearing those remarks which we may wish to make upon them.

For the subject of the present lecture I have chosen two different aspects under which phthisis presents itself—as hereditary on the one hand, including under this term all those cases in which a history of family predisposition is obtained from the patient; and, on the other hand, as non-hereditary or acquired, in which no such history can be obtained.

It would, however, be almost useless to attempt to put before you any views on these points in an intelligible manner until I have devoted a brief space of time to a concise exposition of the process of phthisis and its relation to tubercle, inasmuch as very different theories are held regarding the subject: on the one hand, there are those who believe with Laennec that all phthisis is tubercular, and that tubercle precedes phthisis; on the other hand, there are those who follow the views of Niemeyer, believing that tubercle is an accidental result of phthisis, and that the consumptive patient may become tubercular. The term phthisis should in my opinion be applied solely to those cases of pulmonary disease in which actual destruction of the lung tissue takes place. The destruction of tissue is the main feature of the disease; clinically it is recognised by the signs which indicate the formation of cavities, and it may be detected at once by the microscope, by the presence of elastic tissue in the sputa. This destructive process attacks pulmonary tissue, which from previous disease and from constitutional feebleness is unable to resist, and within this category of disease are especially included catarrhal irritation, congestion, and tubercle. In character the process is ulcerative, and follows the analogy of ulceration in other parts of the body, and I do not always understand why it should be assumed that phthisis should be preceded by tubercle, any more than that tubercle should precede all ulcerations of the intestine or other tissues of the body.

Even phthisical ulcers of the bowels cannot be distinguished in all cases from ordinary ulcerations, and the tubercular thickening and infiltration are then a secondary process. Those who believe that tubercle always precedes phthisis have never attempted to bridge over the intervening condition which alters a process of irritative growth into one of destruction. The so-called necrosis of tubercle is not a necessity of the growth, inasmuch as we sometimes find broad bands of glistening white tubercle extending across the lung in which no liquefaction has taken place; and to say that it may suffer necrosis does not put it into a different position with other imperfectly vitalised tissue, nor does it at all explain to what the process of destruction is due. The relation which tubercle bears to phthisis appears to me to depend upon the slow chronic condition of the destructive process: it is a secondary infection, resulting from the products of altered tissue. Cases have been reported which appear to militate against the view of infection, and in which no infective focus was discovered; but in the first place, rare cases of the kind must be admitted with caution, and in the next place it is very easy to overlook even important conditions in making necropsies, and everyone who is accustomed to such work knows how easy it is to miss a primary abscess in cases of pyæmia: it may occur in the ear or in the region of the bladder, or be hidden away in some recess which is not generally searched in the ordinary course of examination. These cases ought to be put apart and considered separately, as they might lead to fresh information on the subject, but at present I cannot accept them as subverting the theory of infection. The infective virus which results from the phthisical process may be taken up in different ways by the lymphatics and the bloodvessels, leading to acute general miliary tuberculosis; or by the lymphatics only in the neighbourhood of the affected part, leading, for example, to that crop of tubercles which is often seen round a cavity; or lastly, it may be driven into the air sacs through the bronchial tubes propelled by the atmospheric pressure, and leading to that lobular form of tubercle which is seldom absent from fatal cases of phthisis. A great deal too much stress has, I think, been laid on the caseous condition of the infecting focus, inasmuch as the danger of infection appears to be proportionate to the facility with which it can be absorbed; and when caseous matter breaks down and becomes liquefied it is more ready for absorption, and capable of being more readily transferred than when in the caseous condition.

As regards the agency of the lymphatics in absorbing the infective virus, the opaque irritated condition of the lymphatics of the mesentery bear evidence to this point, and I have found in more than one case thickening to a marked extent in the thoracic duct. With regard to the distribution of the matter by the bloodvessels, it must be mentioned that pressure on the bloodvessels prevents the deposit of miliary tubercle in those parts which ought to be supplied by the impeded bloodvessels. To give an example, I would mention a case where a patient suffering from cavity affecting the apex of the right lung was subsequently attacked by pleurisy with effusion. Symptoms of miliary tubercle supervened upon this, from which the patient died. At the necropsy the lower part of the lung, which was pressed upon by the pleuritic fluid, was found free from the miliary tubercle, which was thickly disseminated through the upper part of the lung below the cavity, a plain line of demarcation marking off the affected district.

As regards the distribution of the matter through the bronchial tubes, I must point out that the tracts principally occupied by the lobular form of tubercle are those which are to the front and in the axillary portions of the lung, the posterior lower parts of the lung being seldom affected unless the diaphragm is adherent. There are also certain sexual characteristics in the localities affected by tubercle dependent upon the sexual peculiarities of respiration which support the theory. In woman it is not uncommon to find quite the lower part of the lung free from tubercle, the middle portion of the lung very thickly studded with tubercle. In man the base of the lung is frequently occupied, and especially towards the anterior and middle parts of the base, diaphragmatic respiration being more marked in man than in woman. The theory that tubercle is deposited in those parts which are most used, although containing some truth, is limited to the miliary form, and will not apply to the lobular form of tubercle, inasmuch as the diaphragmatic portion of the lung in man is the most active part of the lung, even under conditions of ordinary respiration. I would also say that pressure on the bronchial tubes prevents the deposit of this lobular tubercle, and that an examination of the bronchioles leading to the affected district will often show that they are in a state of extreme irritation and thickening, while those of other untainted districts are not in this condition.

With regard to the hereditary conditions of phthisis it is well to consider the analogy of other diseases in relation to heredity. In the heredity of rheumatism we know that there is a family tendency to suffer from the disease, and in some cases the tendency is confined to joint mischief, in others the heart may be especially implicated. It has also been observed that some families are especially prone to suffer from eruptive fevers, while others show a remarkable disinclination, and to quote the opinion of M. Ricord concerning syphilis there are families which appear to be

peculiarly susceptible to the ravages of syphilis, while others appear almost invulnerable.

Now, in these instances I think it will not be assuming too much to say that there are two factors in the development of disease. First, the family susceptibility, and, secondly, the exposure to a certain virus about the time of the development of the actual disease. No doubt, I think, can exist that the virus of syphilis or the zymotic fevers may be actually transmitted from parent to offspring, and the unborn child may be attacked by disease transmitted thus directly, or the disease may appear in the infant soon after birth, and in similar fashion the virus of tubercle may be directly transmitted to the infant, and cases have been recorded which appear to bear this interpretation. But susceptibility to the virus does not stand on the same footing, and in this case I presume that there are certain constitutional and structural peculiarities, the result of inheritance, which favour the development of the disease when the individual is exposed anew to the action of the virus.

As regards the development of phthisis, there are two factors which demand consideration: the first is the constitutional susceptibility as shown in the systemic disposition to give way to or permit the phthisical action, and, secondly, the structural defect in the lungs which attracts the agent to those particular organs. Not only a favourable climate is requisite but a suitable soil, the constitutional susceptibility representing the first, the feeble or devitalised structure of the lungs representing the second. The permissive yielding of the system, the absence of non-resistant power, is one of the great features in phthisis. Every-day experience of disease in all its bearings proves how an individual at one time proof against all attacks succumbs readily to disease at another, and this is true not only as regards phthisis, but also in eruptive fevers and rheumatism, the more enfeebled the body the more likely it is to develop disease.

There is perhaps no medical fact more generally recognised, even by the vulgar, than the frequent occurrence of phthisis among families, a fact fully appreciated by the actuaries and medical referees of life assurance offices, yet when search is made among the numerous writings on phthisis for some views regarding the so-called hereditary and non-hereditary phthisis, we find very little regarding any distinctions to be made between the two or concerning the exact conditions of the heredity. In fact, most authors have contented themselves with giving the relative numbers of the hereditary and non-hereditary forms, a point which, although of interest, is not of great practical use.

The attempt was made by M. Briquet working upon eighty-nine cases of hereditary phthisis to draw conclusions as to the effect of the heredity, and although I do not demur to the conclusions which he draws, the number of cases appears to me far too small. A more valuable investigation has been made by Dr. Theodore Williams from the consideration of 484 hereditary cases out of 1000 cases of phthisis, and his results, which are of practical value, are the only ones which are derived from an adequate number of cases. For some time I have been occupied in collecting a number of hospital cases, and although I have not fully completed the work, I can venture to bring before you the results of the consideration of 1600 cases of *males only* in whom the hereditary predisposition was said to be present, and among men the memory of family history is far more defective than among women, so that I consider the positive evidence of hereditary disease among men far more satisfactory than the absence of such evidence, resulting from defective memory frequently, is conclusive as regards the acquired conditions of the disease. The proportion of hereditary to non-hereditary cases I find to be 36 per cent., a number closely approximating to that given by Dr. Pollock (33 per cent.), and identical with that given by Dr. Cotton (36 per cent.); or the relative number may be roughly put as one hereditary to two non-hereditary. To be exact, if we take 3077 male cases of phthisis, 1000 of these will give a history of hereditary or family phthisis. Dr. Williams' cases, derived from a much higher class of society than that from which my hospital statistics are taken, showed a percentage of 48; and this higher number I take to be due partly to the greater interest in points of family history shown by the upper classes, and partly to the diminished liability to acquired phthisis due to the better conditions of life.

The following numbers represent the relative proportions in which the several members of the families were implicated in the disease:—

Father alone	168		
Ditto, with one or more brothers ...	34	232	
Ditto, with brothers and sisters ...	50		
Mother alone	158		
Ditto, with one or more brothers ...	25	241	
Ditto, with brothers and sisters ...	58		
Father and mother	40		
Ditto, with one or more brothers ...	8	68	
Ditto, with brothers and sisters ...	20		
Uncle	47		
Aunt	37		
Grandfather	7	439	
Grandmother	5		
Sisters, and with one or more brothers...	152		
Brothers only	191		
Total	1000		

The above numbers show a slight increase in favour of direct heredity from the father, as compared with the numbers of cross heredity from the mother. Attention must also be directed to the large number of cases in which, with a history of direct or cross heredity, the patient appears to have been, at least at the time of admission into the hospital, the only member of the second generation affected with phthisis.

The next point which the statistics show is the date of attack, and I have arranged the numbers in quinquennial periods beginning from five years of age, each number showing the first year of the period; and I much prefer this system of arrangement to that of taking averages by adding the number of years and dividing by the number of cases; the latter method is not so instructive, and is likely to prove erroneous from accidental causes.

Cases.	Age at which attack commenced.												
	5	10	15	20	25	30	35	40	45	50	55	60	65
Non-hereditary, 400	1	6	55	76	89	71	41	32	14	12	3	-	-
Direct heredity: Father, 400	5	23	74	94	81	54	38	13	9	4	4	1	-
Cross heredity: Mother, 400	3	9	90	113	79	49	33	11	7	3	2	2	1

In this table I have collected 400 non-hereditary cases, in which from the manner in which they were taken it was evident that pains had been taken to question the patient as to any history of family disease. They show (what is sufficiently well known) that the ages most liable to the attack are between fifteen and fifty, the most vulnerable period being between twenty-five and thirty. From the 400 cases of direct heredity from the father, it is evident that the susceptibility is put forward five years, and extends from ten to forty-five, the early periods between ten and twenty-five, being very much more liable, and after twenty-five the periods being less liable than in the non-hereditary form of disease. From the even distribution before and after the culminating period of twenty, it would seem that the effect of direct heredity is to increase the vulnerability to phthisis during these periods of life, but more especially at the time of the growth of the body between boyhood and adult life, as between the ages of fifteen and thirty. In the 400 cases of cross heredity from the mother to the son, the susceptibility is shown in a very remarkable manner during the period of from fifteen to thirty. The susceptibility appears to be loaded upon the period of the chief growth of the body, and it does not appear to be equal during the earlier periods of life.

The following table shows the relative numbers attacked before thirty and after thirty under the influence of heredity.

Cases.	Before the age of 30.	After the age of 30.
Non-hereditary, 400	227	173
Father: hereditary, 400	277	123
Mother: hereditary, 400	294	106

Now, I do not understand on what grounds this discrepancy can be accounted for if it be considered that tubercle is the

sole inherited entity under all circumstances. Actuaries and those connected with life assurances generally hold that the cross heredity is worse than the direct heredity, but I am not aware of any published facts which support this opinion, which is here proved to be correct. Knowing that copious hæmoptysis is common among males, I proceeded to investigate the effect of heredity as regards this occurrence, and the following table will show the cases of phthisis arranged as before in quinquennial periods according to age at the date of the first onset, in which copious hæmoptysis occurred to the extent at least of a quarter of a pint.

Copious Hæmoptysis.

Cases.	Age at which the attack commenced.												
	5	10	15	20	25	30	35	40	45	50	55	60	65
Mother, 123	–	–	27	30	24	18	8	2	3	1	–	–	–
Father, 102	1	4	16	22	21	19	9	4	1	–	1	1	–
Non-hereditary, 105	–	2	14	29	24	16	12	8	5	2	–	–	–

This table shows that out of the 400 cases of direct heredity, cross heredity, and non-heredity, those who were the subjects of cross heredity, that is from the mother, were more liable to copious hæmoptysis than either the cases of direct heredity or of non-heredity, and the numbers of the two latter so closely correspond as to show that heredity from the father has little influence as regards hæmorrhage. The conclusion that I draw from this table is a simple but important one, that an heredity is derived from the mother which differs from that derived from the father, and to this must be attributed the excess of cases of copious hæmoptysis. This difference will be very distinctly seen in the following table, which show the number of cases of copious hæmoptysis occurring before and after thirty.

Cases.	Before the age of 30.	After the age of 30.
Mother, 123	91	32
Father, 102	65	37
Non-hereditary, 105	60	45

Is there any explanation to be given of this fact? There is, and the explanation is obtained from the statistics of hæmophilia which have shown that the tendency to this disease is transmitted by inheritance, and in a large proportion from mothers to sons, and it appears to me that we have here a very strong argument not connecting copious hæmoptysis with tubercle, but with hæmophilia.

I will now direct your attention to the consideration of cases of double heredity, the inheritance of phthisis from the father and mother, and I have not included them with the others, as after diligent search I have only succeeded in collecting 125 cases; for the sake of comparison with the others I have calculated them up to 400.

Cases.	Age at which attack commenced.												
	5	10	15	20	25	30	35	40	45	50	55	60	65
Double heredity, 125	–	3	20	40	23	15	12	9	1	1	1	–	–
Calculated to 400	–	10	74	128	75	48	37	29	3	3	3	–	–

This table shows a close approximation to the table of cases of cross heredity from the mother, and in fact the calculated numbers for 400 cases of double heredity are almost identical with those of the actual numbers of 400 cases of cross heredity between the ages of fifteen and and twenty-five, in the first case being 202 in the latter 203, and the calculated numbers of cases before thirty amount to 287, not quite equal to the actual numbers for cases of cross heredity, which is 294. These cases, however, do not show a greater tendency to hæmorrhage than is shown in the cases of direct and non-heredity, but there is another consideration to which I must direct your attention—viz., the comparative fatality of the various forms of heredity.

Number of Fatal Cases.

Cases.	Deaths.	Per-centage.
Non-hereditary, 400	74	18·5
Father, 400	70	17·5
Mother, 400	68	17
Father and mother, 125	35	28
Calculated, 400	112	—

It appears reasonable to conclude from this table that the effect of double heredity is not only shown by the excessive susceptibility at the period of the growth of the body during early adult life, but that the constitutional weakness is such that the power of recuperation is reduced to a minimum and consequently the death-rate very much increased. Evidently life assurance offices do wisely in rejecting lives of young individuals who have father and mother affected with consumption.

RUPTURE OF THE URINARY BLADDER.[1]

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PART I.

CASES, GENERAL CONSIDERATIONS, AND CAUSES.

RUPTURE of the urinary bladder is an affection which is seen infrequently by practitioners. Cases entering the hospitals are but sparsely sprinkled through the pages of journals, hospital reports, and transactions of societies. Nevertheless it is an injury of sufficient interest and importance to deserve very careful study. It is a condition very liable to be overlooked by the practitioner, or mistaken for peritonitis or for some other lesion, and it may give rise to medico-legal inquiry. Its extreme fatality renders it imperative upon us both to recognise it as early as possible, and to apply promptly any means which may seem to hold out a reasonable prospect of relief. It has fallen to my lot to meet with four fatal cases of ruptured bladder, each case being of a different kind. After the occurrence of my first case in 1871, I collected the particulars of about 100 published cases, made some experiments on the cadaver, and acquainted myself with the opinions of authors for the purpose of writing a monograph on the injury. The undertaking was not then completed, mainly, I think, because I was hoping to acquire an enlarged experience, including the application of operative measures, and it is now resumed because the interest of surgeons in the subject has revived in recent years, owing to the publication of several cases treated, some successfully and others unsuccessfully, by abdominal or perineal incisions, and because I am particularly anxious to examine critically the cases which have been adduced as instances of recovery after rupture of the urinary bladder into the peritoneal cavity. Several authors have treated the subject of rupture of the bladder in a masterly manner, but three authors may be especially mentioned, whose monographs have constituted the leading authorities on the subject. I refer to Dr. Harrison of Dublin,[2] M. Houel of Paris,[3] and Dr. Stephen Smith of New York.[4] But for the collection of cases by M. Houel and Dr. Stephen Smith, I should scarcely have been able to find as readily so large a number, or to deal with the affection with equal breadth of view. Valuable papers or remarks,

[1] A paper read before the Hunterian Society, April 5th, 1882.
[2] Dublin Journal of Medical Science, 1836.
[3] Des Plaies et des Ruptures de la Vessie. Thèse de Concours pour l'Aggrégation en Chirurgie. Par M. le Docteur Ch. Houel. Paris, 1857.
[4] A Contribution to the Statistics of Rupture of the Urinary Bladder, with a Table of Seventy-eight Cases. By Stephen Smith, M.D., Assist.-Surgeon to Bellevue Hospital, New York. New York Journal of Medicine, 1851, p. 336 et seq.

which I have consulted with advantage, have been contributed by Cusack,[5] Stokes,[6] Ellis,[7] Blundell,[8] Syme,[9] Willett,[10] M'Dougal,[11] Erskine Mason,[12] Heath,[13] Morris,[14] Rynd,[15] Solly,[16] Le Gros Clark,[17] and others, including the authors of standard surgical treatises—Birkett,[18] Bryant, Holmes, Gross, and others. In 1878 Dr. Max Bartels[19] published an elaborate paper on Wounds and Ruptures of the Bladder, in which he collated 169 cases; and, according to the writer of a recent excellent article in THE LANCET on the Causes of Rupture of the Bladder, "his paper is the best source of information as regards the statistics of the lesion."[20] The best method of handling the subject will be to relate at the outset the particulars of the four cases to which I have alluded, and then to make remarks founded on the whole series of collected cases. My first case was seen in consultation with Mr. Chambers, of Hackney. Its history was as follows.

CASE 1.—On Wednesday, Oct. 25th, 1871, Fredk. C——, aged forty-nine, was returning from a party, when he tripped and fell down flat on the pavement in the prone position, his nose and stomach coming violently in contact with the ground. He was taken home and put to bed, and some hours later was seen by Mr. Chambers. He was then suffering great pain, chiefly at the lower part of the abdomen. Mr. Chambers introduced a catheter, and drew off a large quantity of blood. The patient was not in a state of collapse. When seen on the following morning, he was still complaining of pain, referred chiefly to the region of the umbilicus. There was tenderness on pressure over the abdomen between the umbilicus and pubes, over each iliac fossa, and over the course of the ureters. There was no marked dulness on percussion. No urine had been passed, and the bowels had not acted. The patient did not complain of any continuous desire to micturate, but whenever the desire was felt he experienced pain in the body of the penis. The testicles were retracted. When the finger was introduced into the rectum, and pressure was made on the base of the bladder, much tenderness was apparent. Increased pain followed the passage of the catheter, and the instrument could not be made to rotate, nor could it be depressed between the patient's thighs; but subsequently, on varying its position, it seemed to slip in further than usual. Only a small quantity of urine mixed with blood was withdrawn through the instrument. These were the main local symptoms when I saw the patient with Mr. Chambers on the Thursday evening, and we were both of opinion that they indicated injury to the bladder. There was one additional symptom present, however, which rendered it uncertain whether a rupture of the bladder was the only injury from which the patient was suffering. This was the occurrence of vomiting. As the case progressed the vomiting became more urgent, and nothing would relieve it. The obstinacy of this symptom, which is passed over lightly in works on surgery in connexion with ruptured bladder, but emphasised as a symptom of rupture of the intestine, led me to suspect some injury to the bowel as well as to the bladder; but in this I was mistaken. On the following day I found the patient decidedly worse, and we informed the friends that he was in great danger, and would probably succumb in forty-eight hours. From this time, I understand (for I did not again see the patient alive), the symptoms increased in severity, the vomiting and pain being most urgent and distressing. The pain came on in violent paroxysms, extending over the whole abdomen. Cold sweats followed, and death took place about 3 P.M. on Sunday, October 29th. Fortunately we were able to inspect the abdomen. On opening the abdomen there was some, but by no means marked, evidence of peritonitis. The recto-vesical pouch was filled with a blood-stained fluid. The bladder was firmly contracted, and lay at the bottom of the pelvis. A rent, which in a bladder half filled would be about two inches in length, was seen at the upper and posterior aspect. The edges of the rent were sloughy. There can be no doubt, I think, that the bladder was quite full at the time of the accident. The patient had been drinking freely. He was of a very stout build with a prominent abdomen. He simply fell flat on his face (his nose was bruised), and the bladder gave way at a point exactly opposite the surface on which the force of the concussion was received. He lived four days after the accident. The treatment consisted mainly in the administration of opium and morphia, and the regular introduction of the catheter.

A year afterwards I met with my second case.

CASE 2.—Charles R——, nineteen years of age, was admitted into the London Hospital on the evening of October 28th, 1872. He had been drinking, and was riding in a cart. His foot slipped and he fell forwards, one of the cart-wheels passing over his pelvis. On admission he appeared to be drunk, and could not give any coherent account of himself; but he complained of severe pain across his loins. The perineum was ecchymosed. The testicles were drawn up to the external rings, could be felt lying just over the pubic rami, and were very tender. On pressing the pelvic bones together, he complained of pain in the sacral region. He had not passed water since the accident, which had happened three hours before his admission. He could move his legs, but experienced great pain whenever he did so. At 11 P.M. five ounces of urine highly coloured with blood were drawn off with the catheter. Some clots were found blocking up the eyes of the instrument. The patient had slept a little during the night and said he felt tolerably easy. He attempted, but unsuccessfully, to pass a motion, only a little blood coming away. The temperature was 99·2°; the pulse 120. In the afternoon, during my visit to the hospital, I examined him and diagnosed a rupture of the bladder on the following grounds:—The patient had been drinking, his bladder was full, and he had evidently sustained a severe contusion in the hypogastric region. He had not passed any urine, and only a small quantity mixed with blood and clots had been drawn off with the catheter. He had constant desire, but inability, to pass water. His comparative freedom from pain was attributable to his not having recovered from his condition of alcoholic narcotism. In addition, the catheter passed easily, but could not be depressed, and it was deflected as it passed towards the left side. The patient complained of great pain whenever catheterism was attempted, and on examination per rectum tenderness in the site of the bladder was elicited. The soft parts over the symphysis were much swollen and ecchymosed and abnormally tender, the ecchymosis and tenderness reaching backwards through the whole perineum. The testicles were greatly retracted. I suspected some injury to the pelvis (the retraction of the testicles was really produced by a separation of the innominate bones at the symphysis), but I could not say positively what the injury was, for the extreme sensitiveness of the soft parts combined with the swelling, rendered it impracticable to make a thorough exploration. I was also uncertain as to the exact site of the rupture of the bladder, the arrest of the catheter tending to negative its position on the posterior wall. Under these circumstances I did not pursue any heroic treatment, content to order narcotics and regular catheterism. On the 30th sixteen ounces of smoky urine were drawn off with the catheter. The patient had slept a little during the night. He had not taken food, and could not keep down even fluids. He was sick early in the day, bringing up a pint of dark-green fluid, very acid in its reaction. He had not passed any water, nor had his bowels been opened. The temperature was 104°; the pulse was still 120. He continued in great pain on and off during the day and following night. On the 31st the pain and sickness continued. Ten ounces of urine were drawn off, and the patient himself passed about six ounces. During the night he passed a fluid motion without blood in it. The following day he was decidedly better. He was neither so thirsty, nor so sick, and he passed a little clear urine. His abdomen, however, was tense and tender, and he was still restless, sometimes raising himself and kneeling upon the bed. A faint hope of recovery began to dawn. The following day, however, sickness recurred and he was in all respects worse. No water could be drawn off, but he passed a few ounces by himself, and probably more with

[5] Dublin Hospital Reports, vol. ii.
[6] British Medical Journal, March 23rd, 1872.
[7] THE LANCET, Sept. 26th, 1833.
[8] Observations on some of the more important Diseases of Women.
[9] Pathology and Practice of Surgery, p. 336.
[10] St. Bartholomew's Hospital Reports, 1876.
[11] Edinburgh Medical Journal, Jan. 1877.
[12] New York Medical Journal, 1872.
[13] Medico-Chirurgical Transactions, 1879, vol. lxii., p. 335.
[14] Medical Times and Gazette, Nov. 1879.
[15] Pathological and Practical Observations on Structures.
[16] Surgical Experiences.
[17] Lectures on Surgical Diagnosis.
[18] System of Surgery, vol. ii., p. 716.
[19] Langenbeck's Archiv für Klin. Chirurg., Band xxii. The Sub-editor of THE LANCET courteously supplied me with the reference. I find that about six of the cases in the list are duplicates. I may say here that I have not been able to do more at present than examine Dr. Max Bartels' list of cases, nor am I conversant with the German authors who have written on the subject.
[20] THE LANCET, Nov. 12th, 1881.

a fluid motion, which the nurse reported. On the sixth day he died. At the post-mortem I found very intense peritonitis, especially in the pelvis. The whole of the pelvic peritoneum was coated with a layer of lymph, and the sigmoid flexure was adherent to the posterior surface of the bladder. On removing the bowel I did not see any aperture in the bladder, for its lips were glued together by lymph, and it was undergoing repair. The bladder was not completely contracted; it was much inflamed throughout. There was a considerable quantity of flaky turbid urinous fluid in the pelvis. The rent in the bladder was at the upper and posterior part, and was vertical in direction. The pubic bones were widely separated at the symphysis, the separation probably having been much increased during the removal of the body to the mortuary.

The third case, though nominally under me, was treated by my colleague Mr. Reeves, and I will refer to it briefly.

CASE 3.—Joseph C——, twenty-four, a Hebrew, had been drinking, and had not passed water for hours. He was sitting on a parapet, and fell a distance of 12 ft. into an area. The accident happened at 3 A.M. on a Thursday, at the end of July, 1874. The patient was brought to the hospital, and the house-surgeon drew off with the catheter about eight ounces of fluid, half blood and half urine. Night and morning six or eight ounces of sanguinous fluid were drawn off. I had given up the charge of my wards to Mr. Reeves, for the purpose of taking my annual holiday; but before leaving town I had occasion to go down to the hospital, and on entering the ward my attention was attracted to the subject of the injury. I found him suffering from pain in the hypogastrium, and from inability, with continuous desire, to micturate. These symptoms, with the history of the case, and the additional facts that the catheter passed easily, but could not be depressed or rotated until it was manipulated with the finger in the rectum, through which the prostate and the catheter beyond it could be detected, left no doubt in my own mind concerning the nature of the case. The less severity of the abdominal symptoms, and a suspicious swelling of the scrotum, with fulness in the right inguinal region and upper part of the right thigh, pointed strongly to effusion of urine into the pelvic fascia through a rent in the bladder, where it was uncovered by peritoneum. As my colleague was expected to visit the cases in an hour or two, I contented myself with explaining my views to the house-surgeon for communication to my colleague, and with recommending incisions into the scrotum in the first instance, and, if urine should issue, into the thigh. My diagnosis was confirmed when the patient died, as nearly as might be four days after the injury. The conjoined rami of the pubes and ischium were found to be fractured, and a hole was discovered on the right side at the antero-lateral aspect of the neck of the bladder.

(To be continued.)

ON

SOME RARE MANIFESTATIONS OF SYPHILIS IN THE LARYNX AND TRACHEA.

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(Concluded from p. 776.)

CASE 3. *Isolated Syphilitic Ulceration in the Middle Third of the Trachea; Inspiratory Stridor with Free Expiration and Unimpaired Voice; Cure.*—Elise N——, aged forty-three, a married Frenchwoman, was sent to my house on the evening of Oct. 10th, 1881, by Dr. De Watteville, with a letter in which he said that the patient, who had been under his care for some slight sore-throat for some time, had suddenly developed, during the last few days, such difficulty in breathing that he wished me to carefully examine her larynx and eventually take the case in hand. On first hearing her speak I was struck with the fact that while inspiration was evidently very laborious, the expiration was quite free, and the voice entirely unimpaired and loud, and I supposed that probably I should have to do with a case of bilateral paralysis of the glottis-openers, in which, as hitherto taught, the co-existence of these three points is to be regarded as pathognomonic. Subsequently, however, I noticed that the inspiration, though stridulous, had not that particular harsh tinkle so characteristic of this latter disease. The patient had very little to add to the information given me by Dr. De Watteville. She pretended to have never been ill in her life, and replied in the negative to all direct and indirect suggestions as to previous syphilis. The catamenia were regular, she had never had any children, no miscarriages, no vaginal discharges, no skin eruptions, sore-throat, &c. When more closely examined with regard to the present throat trouble, she thought she remembered that some difficulty of breathing had occasionally been present on exertion as far back as two months ago, but she had not paid any attention to it.

Present state.—A short, careworn-looking, stout woman; face puffy; lips slightly cyanotic; accessory muscles of respiration in full play; expression frightened; no swelling of lymphatic glands noticeable anywhere; no traces of old syphilitic disease in skin, bones, or mucous membranes of mouth and pharynx. *In spite of the stridulous, laborious breathing, the larynx makes no excursions whatsoever during respiration.* No swelling visible in front of the neck. Pressure on the trachea, especially its middle part, distinctly painful. Laryngoscopical examination unusually easy. The larynx is seen to be in a state of perfect health, nor are there any traces of former ulcerative disease. During inspiration, however, it is seen that from about the fourth or fifth ring downwards the entire anterior and lateral walls of the trachea, as far as accessible to view, are changed into a deep, extensive ulcer covered with a thick yellow purulent secretion, and limited above by a sharp, steep, and much inflamed border. The inflammation extends some distance upwards from the margin of the ulcer, the colour of these parts distinctly contrasting with the normal colouration in the uppermost part of the trachea. It could not be definitely ascertained how far the ulceration extended downwards on account of the purulent secretion covering everything below. No other changes could be detected anywhere. The respiratory sounds in the upper part of the chest were, as in the first case reported in this paper, completely masked by the laryngeal stridor; no traces, however, of concomitant bronchial disease were discoverable. The woman coughed frequently, but the scanty expectoration was of the same character as the secretion seen over the ulcer; and it was natural to conclude that the cough was simply due to irritation of the sensitive bifurcation of the trachea being produced by the secretion from the ulcer running downwards.

Two possibilities only as to the nature of the affection presented themselves to my mind when I passed in review the ulcerative diseases which have been reported to occur occasionally in an isolated form in the trachea. The one was primary cancer, the other isolated tertiary syphilis of the trachea. The first of these diseases could not be *à priori* excluded, considering the patient's age and the entirely negative history with regard to syphilis. Primary carcinoma of the trachea, however, is so exceedingly rare that I hesitated to believe in its existence here, only two cases having been hitherto reported so far as I know—one by Langhans,[1] the other by M. Mackenzie.[2] On the other hand, syphilis of the trachea is not a very rare disease, but relatively rare in comparison with syphilis of the larynx. It was found by Dr. Mackenzie[3] only eight times in 1145 cases of syphilitic disease of the upper respiratory passages—i.e., in one and a half per cent. only; this percentage comprises, however, the total number of cases where syphilitic manifestations were present in the trachea—i.e., it includes the comparatively frequent occurrence of the tracheal syphilis being contiguous to a laryngeal or bronchial one, whilst, as will hereafter be shown, the occurrence of an isolated tracheal syphilis is nearly as rare as that of primary carcinoma of this part.

I left my diagnosis, therefore, temporarily in suspense, intending of course to institute at once an energetic antisyphilitic treatment. The patient was, on the same evening, admitted into the Golden-square Hospital, and a treatment instituted entirely analogous to that employed in Case 1. Its effects in this case were still more striking than in the other. Already after the second day a distinct improvement became noticeable in her breathing, and by the fifth no more danger was to be anticipated from sudden aggravation of dyspnœa. About that time the wards of the hospital had to be closed for repairs, and my friend Dr. Ord was kind enough to take her into St. Thomas's Hospital under his

[1] Virch. Arch., vol. liii., p. 479. [2] Loc. cit., p. 529. [3] Ib., pp. 353, 365.

care, where the combined internal treatment was continued, but the inunctions dispensed with. The tracheal image, under the antispecific treatment, rapidly changed. First the ulcer began to get clean on the surface, when it was seen that the ulceration extended for three or four tracheal cartilages; then gradually it became smaller, until about three weeks after commencing the treatment it had completely healed, and the patient was dismissed cured on Nov. 6th from St. Thomas's. The next day I examined her at my own house with the limelight, and found that the ulceration was replaced by a stellate cicatrix, the centre of which was situated exactly in the middle of the anterior wall of the trachea, at the level of about the fifth tracheal ring. The patient continues at this date (Dec. 10th) taking iodide of potassium, and feels quite well, though the neighbourhood of the former ulcer shows a distinct tendency towards cicatricial contraction.

Remarks.—The effects of the antisyphilitic treatment do not leave room for doubt as to the nature of the affection, and the case would be worthy of record on account of its extreme rarity, even if there were no other reason for its publication.

Syphilis of the trachea is, as stated above, as a rule contiguous with analogous changes in either larynx or bronchi. Only in the rarest cases has an independent syphilitic affection of the trachea been observed, and still more rarely is such an affection limited to the middle third of the trachea. There have been, in fact, so far as I know, only three cases of this sort described—one by Charnal,[4] one by Beger,[5] and one by John Mackenzie.[6] My own case makes the fourth on record.

But even apart from this question of rarity the case offers some very striking features.

(1) It is certainly extraordinary that no manifestations of syphilis or traces of previous specific disease were found anywhere. Instances of this sort have, however, been reported. Von Ziemssen[7] communicates a case of laryngeal syphilis in a man sixty-eight years old, in whom there was a similar absence of all signs of previous syphilis, nor any history of such, and who was completely cured by iodide of potassium.

(2) The ulceration was very likely the result of a gummatous infiltration in the submucous tissue breaking down. This at any rate is the usual course of tertiary syphilitic disorder in the trachea, circumscribed gummata being, according to Gerhardt,[8] exceedingly rare. Whether the infiltration in this case was quite circular, or only involved a part of the circumference of the trachea, cannot be positively decided, because I could not get a view of the posterior wall of the trachea. Such was, however, probably the case, considering the severe dyspnœa of the patient.

(3) With regard to the dyspnœa, the most natural explanation is that whilst the occasional difficulty of breathing, which the patient had experienced before I saw her, arose from gummatous infiltration and subsequent narrowing of the calibre of the trachea, its sudden aggravation was due to the violent inflammation and swelling of the surrounding parts occurring simultaneously with the softening of the infiltration. As to its intensity, I think that Riegel's[9] explanation holds good—namely, "that in an equal narrowing of the lumen the dyspnœa is the greater the quicker it is developed." In my case the sudden aggravation having been developed only a few days previously, the patient had no time to accommodate her respiratory system to the altered condition.

(4) Again, that the inspiratory phase was the one most affected, and expiration quite easy, is in harmony with previous experiences as well as with results of experiments.[10]

(5) On the other hand, my experience with regard to the voice of the patient is different from that given by previous observers—e.g., Schnitzler:[11] it was not weak, nor toneless, nor of limited compass, as I should have theoretically expected from the weakness of the diminished current coming from the lungs through the narrowing, but so altogether normal that no diagnosis could have been made from this fact alone. Another patient, suffering from syphilitic tracheal stenosis with marked inspiratory stridor, whose voice is equally strong and normal, is now under my care.

(6) Perhaps the most important factor, however, in this case is the *absence of the respiratory excursions of the larynx*. Though it has been taught by Gerhardt[12] that this absence is one of the most important differential symptoms between laryngeal and tracheal stenosis, it is not yet, I believe, so much known as it deserves. In the present case we had three symptoms together, from which, according to the teaching of the present day, it might have been almost positively inferred that paralysis of the abductors of the vocal cords was present—viz.: (*a*) Inspiratory dyspnœa, (*b*) free expiration, and (*c*) normal voice. It is quite true that the character of the inspiratory stridor was at variance with that generally observed in the laryngeal disease; but this form of laryngeal paralysis is so rare that but few practitioners will have the advantage of comparing the stridor heard in an urgent case with their memory of the stridor heard in a previous case of abductor paralysis. Here, then, is an opportunity for possibly making a positive differential diagnosis between two widely different affections.[13] Better will it be in all instances to come to a positive conclusion by the aid of the laryngoscope. Should circumstances, however, prevent the use of this instrument, it will be well to remember in future that to establish the surmise of an abductor paralysis, besides the three signs above noted, there must be, fourthly, strong downward excursions of the larynx during inspiration, and that the absence of this symptom, *ceteris paribus*, would point to tracheal stenosis.

In conclusion, I desire to state that though I speak of this patient as cured, I do not mean to say that she is not still in great danger from subsequent cicatricial narrowing. Should this happen, it will have to be met by methodical dilatation, after Schrötter's plan.[14]

In concluding this paper I beg to return sincere thanks to my friend Dr. George Mackern, for kind literary assistance.

Welbeck-street, W.

[4] L'Union Médicale, 1859, No. 21.
[5] Deutsches Archiv für Klin. Medicin., 1879, p. 608.
[6] Wiener Medic. Jahrbücher, 1881, p. 77.
[7] Loc. cit., p. 407.
[8] Deutsches Archiv für Klin. Medicin., Bd. ii., p. 535.
[9] Ziemssen's Cyclopædia (German edition), vol. iv., p. 236.
[10] Ibid., p. 238.
[11] Wiener Klinik, 1877, Heft i., p. 22.
[12] Lehrbuch der Auscult., Tübingen, 1871.
[13] I do not mean, of course, to imply that the dyspnœa in cases of tracheal stenosis must be always of the character which it bore in this case. As to the varieties met with, compare Riegel, loc. cit.
[14] Up to the date of my correcting the proof sheets of this paper (May 30th, 1882)—i.e., nearly six months after the healing of the ulcer—fortunately no such narrowing has occurred.

THE PATHOLOGY OF HEPATIC TUMOURS.[1]

BY WM. ROBT. SMITH, M.D., F.R.S.E.

THE pathological anatomy of the morbid growths of the liver forms an interesting subject for study, and although it is not my present intention to enter at length upon the structural characters of each variety of tumour, I think it well to give first a table of these growths, and then to point out in more or less detail the pathological peculiarities of the more common of them. The tumours may primarily be roughly divided into non-malignant and malignant, applying the term malignant to those growths which experience has taught us have this property of reproducing themselves either locally after removal or in distant tissues.

NON-MALIGNANT.

a. Tubercle. *b.* Syphilis. *c.* Cavernous. *d.* Typhoid. *e.* Cysts.
1. Simple. 2. Parasitic, of which the chief is hydatid.

MALIGNANT.

a. Cancer.
1. Encephaloid. 2. Scirrhus. 3. Melanotic. 4. Colloid

b. Sarcoma.
1. Spindle-celled. 2. Melanotic.

c. Myxoma. *d.* Epithelioma. *e.* Adenoma. *f.* Lymphadenoma.

Whilst this does not represent an absolutely correct list of all the tumours which have been found in the liver, yet I think it will suffice to mention many which are frequently observed.

Tubercle.—This growth occurs more commonly in the liver than is generally supposed, especially in children and young

[1] A paper (with microscopical demonstrations) read before the Gloucester Branch of the British Medical Association, Feb. 21st, 1882.

persons; it is never primary, but accompanies an already existing tuberculosis of the serous membranes, lungs, spleen, &c.; it may readily be recognised by its definite structure. The capsule may or may not have tubercle deposited upon it, but whenever tubercular growths are scattered internally throughout the hepatic substance a layer of fibrinous lymph is generally found upon it. The masses are developed upon the smallest ramifications of the hepatic artery, and are not therefore confined alone to the interlobular spaces, but occur also in the lobules themselves, pushing aside the hepatic parenchyma, and, more or less, compressing the capillary vessels in the neighbourhood. On section the tubercular deposit is found to be present in two varieties: the large and the small, the small being a rounded nodule about the size of a pin's head, and of a light-yellow colour, with usually more or less caseation present, which gives them a cream-yellow appearance. When the mass is large it is of a canary colour, of the size of a pea, hemp-seed, or even larger, and is now no longer a solid body, but contains in its interior a small cavity filled with a soft granular débris, deeply bile-stained, and of an olive-green tint, and is consequently frequently mistaken for a dilated bile-duct; it is, however, well to note, in passing, that owing to compression of the capillary bile-ducts by these tubercular masses, more particularly by the smaller variety, dilatation of the ducts behind the compressed part is very apt to occur, thus forming cavities about the size of a pea, which are filled with mucus and bile. A third way in which such cavities may arise is owing to the infiltration of the walls of the finer bile-ducts with tubercular matter, followed by their ulcerative degeneration, during which the bile is mixed into a soft mass with the detritus. In all cases the liver tissues surrounding the tubercular deposits is slightly fatty. Under a No. 3 objective Hartnach the tumour is seen to be circular in shape, and to contain in its centre a number of round or oval-shaped yellow bodies; these are the giant or myeloid cells, and when present are to a certain extent diagnostic of the growth. The tubercular mass consists of a giant cell with oval-shaped nuclei arranged crescentically. It is seen to contain a vacuole which during life is filled with fluid, but which after death becomes empty. The rest of the cell and its nuclei are granular. From the periphery of the cell delicate processes arise, which divide and subdivide dichotomously, thus forming a dense reticulum, which is bounded externally by a capsule of fibrous tissue. The meshes of this reticulum are filled up with small round cells and large endothelial cells. The small cells are most abundant, and are really ordinary connective-tissue cells. This structure forms what is known as a giant-cell system. The increase of the tumour is frequently cut short by caseation of its centre in consequence of defective blood-supply, arising from compression or actual obliteration of the hepatic capillary vessels. The source of these cells is still a question in dispute. Schuppel says that they originate within the bloodvessels from the white blood corpuscles, whilst others think they are derived from a proliferation of the endothelium lining the bloodvessels.

Syphilis.—This disease affects the liver in various ways. I have already pointed out that the small waxy liver is invariably found as one of the accompaniments of the tertiary stage of the disorder, and it is also most probable that the fine cirrhotic liver is occasioned by the syphilitic poison. The form of disease of which I wish now to speak is that which is commonly known as syphilitic hepatitis. In proportion to the prevalence of syphilis this affection occurs no doubt rarely, but it is certainly one of the most common varieties of the tertiary syphilitic disorders of the abdominal viscera; it is interesting, however, to note that in hereditary syphilis the liver is an organ very frequently attacked, and then exhibits, according to the evidence of many observers, amongst whom I may mention Gubler, Vassener, Weguer, and others, decided inflammatory changes. Wilks, however, in this country, in a large number of autopsies which he made found nothing but fatty degeneration of the organ with thickening of the capsule; his paper, which is one of great interest, is published at page 167 in the 17th vol. of the Pathological Transactions.

The anatomical alterations in the organ consist of two distinct processes variously combined with each other; on the one hand, there is a hyperplasia of connective tissue, on the other, a development of nodules or gummata. In the first the interlobular connective tissue is much increased, and this shortly becomes converted into true cicatricial tissue, and as we noticed in the cirrhotic liver, so here a gradual wasting of the parenchyma takes place by the contraction of this foreign growth. There is, however, one remarkable difference between the tissue produced as a result of the syphilitic poison and that in ordinary cirrhosis, for the former shows a great tendency to undergo fatty and caseous degeneration, the products of which are completely absorbed, leaving nothing behind but a cicatrix to mark the site of the foreign growth. This growth of cicatricial tissue may be strictly localised or diffused, and between these two extremes we may have any possible modification; to this no doubt is mainly attributable the many varieties of the disease explained by some authors.

The diffuse variety is most frequently observed in children who die of congenital syphilis, and but seldom in adults. The liver is enlarged in all directions, its weight and specific gravity are increased, and it has a dirty yellowish, or reddish-grey colour; its surface is smooth, glistening, and non-adherent to surrounding structures. On section, its tissue is found to be pale, glistening, firm in consistence, and homogeneous. In the section under the microscope the interlobular connective tissue will be found to be abundantly studded with fine granular cells, either round or spindle-shaped; within the acini also will be noticed small groups of these same cells, arranged round the capillaries, pushing aside the true hepatic cells, which appear more or less flattened and granular from commencing fatty changes, whether this growth arises from a hyperplasia of the interlobular connective tissue, or from the capillary walls, is still a point in dispute; most probably both sources contribute. It is in this invasion of the whole substance of the lobules that this variety of syphilitic disease differs from ordinary cirrhosis, which is altogether interlobular.

Circumscribed syphilitic hepatitis, or hepatica gummosa, has been observed in childhood, but occurs most frequently in adults, constituting in them by far the most frequent form of hepatic syphilis. It consists in the deposit of one or more masses of connective tissue in the substance of the liver, which may either be normal or the subject of amyloid or fatty changes, and in conjunction with which alterations of an analogous character are found in other parts of the body. Upon opening the abdomen the neighbouring organs are found to be firmly adherent to the liver, especially the diaphragm; on removing the liver from the body it is seen to present a very characteristic appearance. Its surface is most irregular, being greatly lobulated or segmented, the lobes or segments being joined by broad bands of fibrous tissue. A number of hard nodules are also seen, which show a predilection for certain situations, particularly, according to Virchow, those parts of the surface most exposed to injury; and for this reason, owing to the great traction of the liver upon its suspensory ligament, the formation of the new growth is favoured at its point of attachment. Here also three or more stellate cicatrices are frequently seen. The transverse fissure of the liver and along the course of the larger branches of the portal vein are likewise favourite sites for these morbid growths. The capsule is generally much thickened, and frequently greatly indented. On section bands of coarse cicatricial tissue are seen running into the organ from the capsule, which by their contraction cause the characteristic segmentation; lying within and continuous with the cicatricial tissue, rounded tumours or gummata are found varying in size from a mustard-seed to that of a walnut; they are rounded, doughy in consistence, of a buff- or cream-yellow colour, with a well-defined outline, but are incapable of enucleation; they are rarely solitary, being most frequently grouped in clusters. The rest of the liver tissue is healthy, more rarely cirrhotic and bile-stained; in some cases patches of localised waxy disease are seen. Under the microscope these gummata are seen to be composed of a fine or coarsely fibrillated connective tissue, in the meshes of which are numerous round and spindle-shaped cells, together with many capillary vessels and a ramifying network of gall-ducts. The hepatic cells are atrophied and in a state of fatty degeneration. At the periphery of the new growth the progressive proliferation of cells infiltrating the interlobular connective tissue will be noticed. The larger nodules consist of two distinct parts, a central part, presenting the characters of inspissated pus, or of a dry cheese-like substance, and composed of a fibrous network of fat globules and broken-up cells; surrounding this is an areola of greyish cicatricial tissue consisting of round or spindle-shaped cells, the former being situated nearest the central yellowish mass. The tissues contain numerous small bloodvessels, the inner and middle coats of which are much

thickened, so that they are more or less obliterated. A gumma may therefore be looked upon as a portion of cicatricial tissue which has become necrosed owing to its vascular supply being cut off by the obliteration of the bloodvessels; destruction of the cellular elements and caseous degeneration quickly follow a diminution of the nutritive supply in the central part of the growth, which is, of course, farthest removed. The products of this degeneration are then absorbed, and the tumour gradually diminishes in size, ultimately becoming a mere radiating cicatrix in the hepatic tissue. If these growths are situated near the surface, it will be readily understood that, owing to the contractions of the cicatricial tissue, puckerings must necessarily follow, and between the deep furrows thus caused the glandular structure, which is most probably hypertrophied, projects above the surface, forming more or less globular eminences, which give the syphilitic liver its peculiar character. The absorption of these degenerated tumours is a subject of great practical importance, as by this means the infection of other organs is possibly produced.

The third variety of hepatic tumours, "the cavernous," to which I propose to refer, is one of no clinical importance. They vary in size from a pea to that of a walnut, are multiple, sharply defined, and filled with erectile tissue. At first sight they appear to be mere extravasations of blood; but if a stream of water be allowed to flow over them the blood present is washed out as from a sponge, and a grey-coloured fibrous network remains. Near the capsule these tumours have a livid appearance; they are never found in children, always when present occurring in adults. The tumours are composed of a network of connective tissue, in the cavities of which the blood circulates; that the blood does circulate is proved by the absence of all blood pigment, for if present this would of course at once indicate an extravasation. Examined under the microscope, a trabecula will be seen to consist of fibrous tissue, with spindle-shaped cells scattered here and there throughout its structure. By some these cells are supposed to be involuntary muscular fibre cells, but I think they are nothing more than ordinary connective-tissue corpuscles, and on its surface a layer of endothelium. There is also an abundance of elastic tissue fibres surrounding and traversing the spaces. At the periphery of the tumour a layer of connective tissue is seen separating it from the liver substance proper, which layer sends out processes of connective tissue between adjacent lobules; as this tissue increases in amount and extends along the portal canals it naturally produces pressure upon the hepatic parenchyna and lobular vessels; the former slowly atrophy and the latter become compressed, the hepatic vein collapses, ultimately becoming the centre of the growth as the tissue gradually encroaches on the lobule converging towards the vein from all sides. The tissue then undergoes great contraction in a direction at right angles to the long axis of the bloodvessels, giving rise to the dilated chambers which are so characteristic of this growth. The cavernous tumour is therefore nothing more than an increase of interlobular connective tissue followed by what Rindfleisch calls cavernous metamorphosis. It must not be supposed that the chambers are mere dilatations of pre-existing bloodvessels. In this respect the cavernous tumour differs widely from that of phlebitis obliterans. In this disease one of the larger portal vessels becomes occluded, but the same amount of blood being sent to the liver into the smaller vessels these must dilate to receive it, which they do enormously, pressure is thus brought to bear on the hepatic cells, which ultimately disappear, whilst in the vessels themselves there are large quantities of blood cells. The lacunæ, of which cavernous tumours are composed, Virchow has shown can only be filled by injecting through the portal vein or hepatic artery, and not by injections made through the hepatic vein; this seems to be easily explained by remembering the site of the growth, the portal canals contain branches only of the portal vein and hepatic artery, and a tumour arising here would naturally obtain its blood-supply from these sources.

The last tumour on which I will remark in Group 1 is what I have called the typhoid. If we make a section of the liver of a patient who has died from a severe attack of typhoid fever, we shall, in a great number of cases, observe minute yellow points scattered at intervals throughout its substances, which seem almost like little masses of tubercle.

If the section of such be examined under a No. 7 objective Hartnach the lesion will be observed to be one of the middle zone, and to consist of a little round deposit, which stains rather more deeply than the surrounding tissue with picro-carmine, it seems to be almost entirely cellular, and although, to some extent, it resembles tubercle, yet in its microscopical characters it is quite different—the deposit appears in every second or third lobule—they are formed by the breaking down of several of the liver cells by cloudy swelling, the first change noticed is that the periplast becomes extremely granular, owing to the precipitation of the cellular albuminoids, which are normally held in solution by the natural alkalinity of the tissues. The origin of these changes is not quite determined, but it is supposed to be of an embolic character.

(To be continued.)

PRACTICAL NOTES ON NEURALGIA AND ITS TREATMENT.

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THERE exists no better established nor important fact than that neuralgia is a disease arising when the body is in a state of general debility. This is now more generally recognised than formerly, when pain was too often regarded as the symptom of what was termed "sthenic inflammation," to be energetically treated by low diet and depleting remedies.

As this disease is frequently mistaken for rheumatism, gout, spinal irritation, &c., and *vice versâ*, it may be well to name some of the leading features of a typical case of neuralgia. 1. It occurs when general debility exists, is increased by fatigue, mental or bodily, but relieved by food and sometimes by stimulants. 2. The pain, which is sudden, darting, and excruciating exhibits remarkable intermissions, especially in the early stages of the complaint, and the constitutional disturbance is slight (temperature, pulse, &c., frequently normal). 3. It is usually unilateral. 4. As the disease advances tender spots (points douloureux) are formed in the course of the affected nerves.

That debility is a prime factor in neuralgia we have but to call to our remembrance cases which constantly appear. The overworked, anæmic, badly fed girl suffering from neuralgia of the fifth, the anxious struggling man in the early years of professional life or of business, the married woman weakened by childbearing or over-zealous in domestic cares, and the neuralgia of declining years, degeneration having set in, nutrition being defective. In our diagnosis we are assisted by the family history of the case, whether nervous disease in any of its varied forms has existed.

The treatment should be directed in every case towards improving the general health. Nutrition must be improved by very nourishing food, well masticated, and if stimulants are prescribed they should be given with food; pure air night and day; great cleanliness, and the use of sponging with sea-salt and water. Cod-liver oil and cream are of service, given after meals. Quinine in facial neuralgias, and also chloride of ammonium; arsenic in cases of angina pectoris; iron and strychnine in anæmic states. Bromide of potassium is useful in mild cases, where the pain is not severe, but a general nervous condition exists, with restless irritability. The subcutaneous injection of morphia, beginning with one-sixth of a grain, is the most speedy and useful remedy we possess, and is a curative agent; for it checks at once pain, and thus gives us the opportunity of carrying out all those constitutional measures for improving the general health, whilst it disturbs but little appetite and digestion, and with use a toleration is established, and appetite sometimes improved; for nothing is more apt to destroy appetite than the distress of severe pain. In chronic cases of neuralgia a blister, not necessarily carried to the point of vesication, is often of the greatest possible service, and it is a treatment peculiarly adapted to old-standing intractable cases.

Having sketched the mode of treatment it is unnecessary to give illustrations of the ordinary cases which constantly present themselves in hospital and private practice. I therefore select from my note-book one of several successful cases where neuralgia has occurred in that period of life when a cure is rarely accomplished (some authorities say *never*)—the degenerative period.

In March, 1877, I saw, in consultation with Mr. Walker,

of Wakefield, a lady aged seventy-six, who in early life had suffered severely from neuralgia of the stomach, which had been much aggravated by the treatment then in vogue of insufficient nutritive food and depleting remedies. This patient was seized with violent pain, affecting the nerves of the scalp, and which became so excruciating as to deprive her of sleep for many successive nights. She became delirious in consequence, and we decided to inject one quarter of a grain of morphia. This gave prompt relief and procured sleep. She was ordered turtle-soup, oysters, and an exceedingly nutritious dietary. She was well supplied with food at night also, which invariably relieved the pain. A mixture, containing half-drachm doses of aromatic spirit of ammonia and fifteen minims of tincture of NUX VOMICA, seemed greatly to improve the appetite, which became prodigious and surprising. The tendency to degenerate was kept prominently in view, pure air was freely supplied in the bedroom, and every other measure taken to improve nutrition and the general health. As a local application, the chloroform liniment with tincture of opium relieved pain, and as soon as the case became chronic, the hair was cut closely and blistering fluid applied to the tender spots, which were well developed in this case; multiple abscesses formed, and were frequently opened by Mr. Walker. This old lady, after an illness of three months' severe suffering, recovered perfectly, left Wakefield for Harrogate, and is now (1882) in fair health, having had no return whatever of her former complaint. Her body is feeble, but her mind extraordinarily clear and bright for a lady who has passed her eighty-first year.

ARTIFICIAL ERUPTION PRODUCED BY MECHANICAL MEANS.

BY ALFRED SANGSTER, M.B., M.R.C.P. LOND.,
PHYSICIAN TO THE SKIN DEPARTMENT, CHARING-CROSS HOSPITAL.
(*From Notes by* Mr. BAKER, *late House-Physician.*)

L. F——, a delicate, fair-haired girl, aged seventeen, presented herself at the out-patient department at Charing-cross Hospital with a peculiar and very disfiguring appearance of the face. Both cheeks were entirely covered by a thin, brownish, sharply defined, even incrustation, beyond which there was a broad hyperæmic border. On looking closely into the surface, many minute scattered hæmorrhagic points were seen. There was a large pigmented area on the neck, which the patient stated had been similarly affected. The appearances were not those of eczema or erythematous lupus, and indeed were so unusual that some questions were put to the stepmother, who accompanied the patient, as to whether she had any suspicion that the eruption was produced artificially. She, however, was quite surprised at the suggestion. All that could be elicited from the patient herself was that the face had "burnt" very much after exposure to cold wind, and that it presented the above-described appearance when she woke the following morning. She was admitted into the hospital.

From her history it appeared that she had good health until two years and a half ago, when she was laid up with an abscess in the ankle, the result of a sprain. Soon afterwards she had another abscess in the back, about the level of the second lumbar vertebra. The scars of these abscesses were quite conspicuous. Some deep scars on the left hand were accounted for by abscesses following a poisoned wound of the finger. There were some broad superficial scars on the extremities, which were said to have been left by patches such as those above described on the face. Some elongated excoriated patches were discovered corresponding to the position of the waistband.

During her stay in the hospital the patient frequently complained of sore-throat, which at these times seemed swollen externally about the thyroid cartilage. Several fresh patches made their appearance (during the night) while she was under observation, one on the left forearm, one at the bend of the left elbow, and a third over the sternal region. They were irregular in outline, those on the forearm and sternum three or four inches in the longest measurement. All presented the same initial heat and redness, with subsequent superficial incrustation and surrounding hyperæmia; they ran a similar course, gradually fading, the crust falling in about ten days, leaving the part somewhat livid but not scarred. Although the case was closely watched, and our suspicions concealed as much as possible, we were unable to prove how the patches were produced, at length it was decided to accuse the patient. Accordingly, Mr. Baker, the house-physician (to whom I am indebted for great interest taken in the case), having excoriated his arm by continued friction with the pulp of his fingers, taxed her with the deception. She confessed to having produced the patches in the same way. She stated that she had not menstruated for two years, but that at the periods when the flow should have returned, red irritable patches used to appear on different parts of the body; these she rubbed and excoriated, afterwards she found she could produce the patches at will, without any previous spontaneous reddening of the part. When she produced a patch on the site of an old one a superficial scar was left. The reason she gave for producing the patches was that her life at home was unhappy, her father was a drunkard, she worked long hours, and had to give all her earnings to her stepmother, who was unkind to her.

Remarks.—Although the eruption was looked upon as artificial from the commencement there were one or two facts connected with it which gave it a certain reality, or, at least, called for explanation. It was astonishing that a young girl should so disfigure herself, even for a special purpose. However, it seems to be a fact that artificial eruptions are not unfrequently produced on the face presumably to enlist greater sympathy. The broad superficial scars, which she stated had been left by the eruption, suggested the employment of some chemical, such as those usually had recourse to. Yet the conditions under which the patient was placed whilst in the hospital rendered the concealment of any such substance almost impossible. The occurrence of patches in the region of the waistband hardly looked like design. The girl was rather cheerful and well-spoken; she was not hysterical, and, in the absence of assignable motive, would not have been suspected of fraud. The sequel proved, however, that she was overwrought, harshly dealt with, and probably in need of rest, which she could only obtain by feigning disease. There may have been truth in what was said about the amenorrhœa and the spontaneous red irritable patches; however, she did not mention this at first, and she menstruated while in the hospital. The case seems worthy of record as an example of the production of an artificial eruption by mechanical means, most artificial eruptions being due to the application of some chemical or irritant: nitric acid, cantharides, mustard, &c.

ACUTE PROLAPSUS OF RECTUM; SUGGESTION AS TO TREATMENT.

BY C. E. MACNAMARA, L.R.C.S.I.,
RESIDENT SURGEON TO THE PUBLIC HOSPITAL, GEORGE TOWN, BRITISH GUIANA.

PROLAPSUS RECTI of the above form is a hernia the reduction of which unquestionably is often, even to a skilful and patient surgeon, a matter of anxiety, and always to the conscious patient an operation of considerable pain. And I therefore think that any suggestion as to a mode of treating it in a manner which deprives it of these objections will be received gratefully by many surgeons. The following plan I have found in many obstinate cases to have been speedily and uniformly successful. I may here, perhaps, be allowed to mention that when I was on leave and at home during 1879, I acquainted my father, Professor Rawdon Macnamara of Dublin, with the plan, and he, as Surgeon to the Meath Hospital, and also Surgeon to the Lock Hospital of that city, has had many opportunities of testing its value, and has reported favourably. With this excuse for touching upon a subject which has been written upon in articles by various authors, I will briefly state the mode of treatment. A case in point may be acceptable.

A. B—— was admitted into the Public Hospital under the

care of Surgeon E. G. Leary, who, finding difficulty in reducing the mass, asked me, as I happened to be in the hospital, to render assistance. I found the man suffering from a very large prolapsed rectum, about as large as a full-grown fœtus' head; it had been three days down, and was highly congested and sensitive. Owing to my previous experience of its utility, the following simple plan was pursued. I placed the patient in the usual position, on knees and elbows, with head low; the gut being well-cleansed, an ordinary smooth dry towel was thrown over the rectum, so that it would have the bowel at about its centre, then grasping with the left hand the bowel through the towel (which should be tightened over the gut), with an ordinary ruler pressure was slowly made, with the towel intervening, at the opening of the gut; this, then, gradually went in with the towel, and by simply pushing the ruler it and the towel returned the rectum to its natural position, just as the partly inverted finger of a glove may be returned in position by a penhandle or pencil. In removing the towel, after the withdrawal of the ruler, caution must be observed; it must not be pulled out, but gradually twisted round in the one way, when it will come out with little or no difficulty. This plan I have found simpler, cleaner, and to the patient far less painful than the usual method of manipulation. I would insist on the necessity of the use of a smooth dry towel, to which the bowel clings, and also of the firm though gentle grasp of the towel and bowel by the operator's left hand. A little sweet oil, injected with a glass syringe (when the bowel is returned), helps the removal of the towel past the sphincter, which from its dilated state, does not hold as firmly as might be expected.

I am quite aware of the probability of this treatment having nothing new about it; but I have not seen it reported or found it suggested in articles treating of the complaint.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

OSTEOMA OF ORBIT.

(Under the care of Mr. HULKE, F.R.S.)

THE tumour in the following case appeared to be a partial hyperostosis of the skull, an affection which has usually been noticed to begin in children of somewhat greater age, but has been observed in children even younger than this. In its extremest form it occasions the condition which has been named Leontiasis ossea (Virchow's Krankhaften Geschwülste, Bd. ii., s. 25).

A flaxen-haired little girl, aged four years, was admitted into Queen's ward on Oct. 30th, 1881, with very considerable protrusion of the eyeball, first noticed fourteen months previously. The child seemed in thorough health. The eyeball was displaced downwards and forwards. The finger-tips pressed in between the eyebrow and eyeball met a large mass of bony hardness apparently attached to the orbital roof. The apparent absence of definite limit and the very early age of the child were unfavourable to the idea of the tumour being an exostosis, which in the orbit is usually stalked, is more often connected with the inner wall than other parts, and generally begins somewhat later in life. The practicability of its removal was, therefore, doubtful. An exploratory incision showed the mass to consist of very vascular spongy bone connected with the external angular process and orbital plate of the frontal bone. It extended almost to the apex of the orbit, and had not any definite boundary. As its removal was proved not to be feasible, the wound was closed. Immediate union occurred, and the child was taken home. The further progress of the case is unknown.

ERITH COTTAGE HOSPITAL.

CASE OF BATTEY'S OPERATION, OR OÖPHORECTOMY, FOR SEVERE DYSMENORRHŒA.

(Under the care of Mr. FRED. B. JESSETT.)

E. N——, aged twenty-one, first came under observation in June, 1876. She was a stout but delicate-looking girl, with light auburn hair, clear delicate complexion, and light-blue eyes. She had always enjoyed good health until about a year previous, when she was attending upon an invalid lady. One day, while lifting her charge, she felt a sudden pain in the left side, followed by a great flow of blood from the vagina, so much so that she could not stand on account of the blood running so freely. After this she suffered great pain from time to time, which obliged her to leave her situation. She could, however, get about perfectly well and enjoy herself until 1875, when the pain at her monthly periods increased so much that she had to lay up for several days before the time, and could take nothing. From this time matters got rapidly worse, and although she consulted several medical men she could get no relief. There was no apparent displacement of the uterus. The sound entered freely. She always had considerable tenderness over both ovaries, more especially over the left, but no enlargement of either could be discovered. She rapidly lost flesh and got into a low wretched state. For several days before the menstrual discharge she lay writhing on her bed, eating nothing, and getting no sleep for nights together, although she took large doses of chloral hydrate, bromide of potassium, opium, and morphia by the mouth, and had belladonna and opium suppositories as well as injections of morphia under the skin. The os uteri was dilated with sea-tangled tents, and the patient was kept on her back for some time. Nothing seemed to do the slightest good. In 1877 she went to the Samaritan Hospital, where she remained an in-patient for seven weeks without receiving any benefit. She was discharged from that institution with a stem pessary and returned home.

She again came under Mr. Jessett's care, the extreme pain increasing month by month. So long did it last, that the unfortunate girl had only a few days' ease before the pain began again, and in 1879 it was suggested that the only cure was to remove the ovaries. It was pointed out at the same time that the operation was not without great risk, and would effect a constitutional change. Neither mother nor daughter could, however, make up their minds to submit to the operation, and things went on for another twelve months, when the girl was so utterly worn out and exhausted by pain, that she begged to have done whatever might be thought best to relieve her sufferings. It was decided, therefore, to take the chance of the operation relieving her. She was admitted into the Cottage Hospital on July 15th, 1880; and on the 17th of the same month she was put under chloroform, and both ovaries were removed without any difficulty. An incision about four inches long was made in the middle line; the peritoneum was divided, and two fingers were passed behind the fundus uteri and then moved to the right ovary, which was drawn well out and its pedicle ligatured with fine carbolised silk, after transfixing the mesovarium with a curved needle. The ovary was then cut away with scissors. The left ovary was next found, drawn forward, and treated in the same manner. The wound was brought together with fine carbolised silk sutures, and dressed with carbolic oil (1 in 40). No other antiseptic precaution was taken.

The temperature rose to 101° on the day following the operation, and the patient had a great deal of vomiting, which was kept in check by ice. She had a tenderness over the bottom of the abdomen, more especially in the left iliac region. On the third day she had a slightly coloured discharge from the vagina. The temperature kept high for some days, and the tenderness increased in the left iliac region. About a fortnight after the operation there was a considerable purulent discharge from the vagina. The tenderness of abdomen decreased, and from this time she gradually but slowly recovered, and was discharged from the hospital cured on the 20th of September, and sent to Folkestone.

The girl rapidly regained flesh and strength, and has never had any return of the pain. She is now (one year and nine months after the operation) quite well, and able to

attend to her duties as well as ever she did. She has never menstruated since the operation.

The ovaries were sent to London to be examined microscopically, but unfortunately they were mislaid. They were somewhat flattened, and each contained two or three small cysts. The substance appeared toughened, and the stroma drawn, giving them a nodulated appearance externally.

LEICESTER GENERAL INFIRMARY.

DIFFUSED POPLITEAL ANEURISM; LIGATURE OF THE FEMORAL ARTERY AFTER A SHORT TRIAL OF COMPRESSION; CURE.

(Under the care of Mr. JULIUS CLARKE.)

FOR the following notes we are indebted to Mr. W. B. C. Treasure, the dresser.

Edward S——, forty-three, labourer was admitted on November 29th, 1881. He stated that on Nov. 12th, whilst lifting a heavy bale of yarn, weighing 8 cwt., with another man, he felt a sudden snap in the calf of the right leg, accompanied by very sharp pain; at the same time he turned very pale and faint, and would have fallen but for assistance. The leg at once began to swell rapidly at the back, and became very hard, causing acute pain. He walked home (a distance of a quarter of a mile) with difficulty, and immediately took his bed. He noticed that the skin over the calf of the leg became dusky, but no bruising appeared. The patient had previously been a healthy man. He served twenty-one years in the army, eleven abroad, and during that time drank freely of spirits. He also acquired syphilis twelve years ago, characterised by a hard chancre, followed by induration of the inguinal glands, and sore-throat, but no skin eruption. He was married; his wife had miscarried four times, having no children alive. He never noticed any swelling in the leg before the accident.

On admission he appeared anæmic, with dilatation of the small veins on the cheeks; he had marked tortuosity of his arteries, and pulsation was visible in the temporal and other arteries. The right leg presented a large swelling at the back extending from the top of the popliteal space to the ankle. It was most prominent in the popliteal space; the swelling was very tense, but did not fluctuate, and the skin over it was dusky. The lower part of the leg and the foot were œdematous. Expansile pulsation was present in the popliteal space and extended three inches down the leg, where it gradually became lost; corresponding to this a distinct aneurismal bruit was heard; no pulsation could be detected in the arteries of the foot, which appeared warm to the touch. He complained of severe pain extending from the popliteal space to the ankle, but sensation was perfect; the movements of the ankle and toes were much impeded. The heart, lungs, and internal organs appeared fairly healthy, and the urine was free from albumen. The tongue was catarrhal; bowels open. He was placed in bed with his leg on an inclined plane, and an evaporating lotion applied to it. He was given twenty minims of tincture of opium to procure sleep at night.

Dec. 2nd: A bag of shot weighing one pound was placed on the common femoral artery in the groin; the leg then measured eighteen inches round the calf at a point nine inches above the internal malleolus.—3rd: the weight was increased to three pounds.—4th: The leg measured seventeen inches and a half, and was rather less tense, but otherwise as before. A consultation of the surgical staff having been held, he was placed under ether, and the superficial femoral artery was ligatured with carbolised catgut at the apex of Scarpa's triangle. The operation was performed antiseptically under Lister's spray; the wound was sewn up with horsehair sutures, and a small drainage-tube inserted at the lower part; the leg was wrapped in cotton-wool.—5th: The man had recovered from the ether well without sickness, and appeared comfortable, with, however, some pain shooting down the back of the leg; at 10 P.M. he had ten minims of tincture of opium, and slept well afterwards; his temperature, which on the evening before had been 100·2°, was now 99·4°; the dressing was, by a small window, just opened sufficiently to withdraw the drainage-tube (under spray).—7th: The man was comfortable and free from pain; he retained perfect sensibility in the toes. Temperature 99·4°.—9th: The leg was examined; sensation remained perfect; there was sign of pulsation in the popliteal space, and the tumour was quite soft; temperature normal; slept well without draught.—10th: The wound was dressed for the first time under the spray; there was no inflammation and no pus; the wound had entirely healed from end to end by first intention; some of the sutures were still left in; the man complained a little of flatulence and pain in the abdomen; temperature 97°; bowels open.—12th: The remaining sutures were withdrawn; the man felt well; the pain in the stomach was relieved; temperature, morning, 97·4°; in the evening he had troublesome diarrhœa, which was checked by an enema of starch and opium.—17th: The man continues well; the leg measured seventeen inches and a half to-day, and was quite soft with absence of any pulsation; the temperature, however, went up to 101° at night.—24th: Patient feeling well; temperature normal; limb measured sixteen inches, with absence of fluctuation or pain.

January 2nd, 1882: The tumour had again decreased three-quarters of an inch in size, and was quite soft; the man appears well, with a good appetite.—13th: A further decrease in the size of the tumour; the leg was bandaged firmly from the ankle; general health good; no pain in leg; temperature, evening, 99·4°.—27th: The man continued well, and was allowed to sit up in bed; the limb measured thirteen inches and three-eighths.—6th: The size of the limb was twelve inches and seven-eighths. He had no pain in it; and his general condition remained good; temperature 99°.—21st: The limb still remained small, with absence of any heat or pain, and the general aspect was so favourable that he was allowed to get up, being lifted on to a couch.—27th: The man's temperature having risen to 100·4°, with some œdema of the foot, he was again ordered to bed. He had on the previous day used the leg in walking with the help of crutches.

March 5th: He was again allowed to get up and to walk; continued well, the temperature having dropped after his return to bed.—14th: Patient can now walk well without a stick. The leg is still bandaged, as there is a tendency to œdema after being about on it. It measures thirteen inches and a half—the same as the other leg. Pulsation is felt in the post-tibial artery at the ankle, but there is none in the calf, and no swelling in the popliteal space. He can move his ankle and knee quite well, and the leg is very useful.—18th: Discharged.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Removal of Laryngeal Growths by Endo-laryngeal Operations.—Thyrotomy for the removal of Foreign Bodies impacted in the interior of the Thyroid Cartilage.

THE ordinary meeting of this Society was held on the 23rd ult., John Marshall, Esq., F.R.S., President, in the chair. There was a large attendance, for, in addition to the papers of the evening, a microscopical demonstration of various forms of bacterial organisms was given.

The first paper read was one upon Two Cases of Laryngeal Growths, in which the neoplasms were successfully removed by endo-laryngeal operations with the aid of the galvano-caustic method, by Dr. FELIX SEMON, of which the following is an abstract:—The first of these two cases was one of multiple, sessile, in part subglottic, recurrent, papilloma, occurring in a young lady, aged twenty, after a common cold, and giving rise to complete aphonia and slight dyspnœa on exertion. The supraglottic portion of the growths having been removed with forceps, and the tendency towards recurrence, which at first was most markedly manifesting itself, having been gradually exhausted after repeated removals, the subglottic papillomata, which it was found could not be removed by any endo-laryngeal method, were destroyed with the aid of a suitably bent galvano-cautery which was introduced between the vocal cords during the act of deep inspiration. The patient completely recovered her voice, and has been free from the recurrence of the growth for more than four months. The second case was one of a very large and hard, broad-based Fibroma, originating from the anterior commissure of the vocal cords and the anterior third of the right vocal cord, occurring in a man, aged thirty-three, and causing complete aphonia and

dangerous dyspnœa, filling up as it did almost the whole of the glottis cavity. Its growth was to be traced for the last ten years. It was removed by the aid of a galvano-caustic loop passed round it, and was found to be one of the largest benign laryngeal growths on record. The patient completely regained his voice and is now quite well. Rossbach's method of producing local anæsthesia of the larynx by directing two ether sprays simultaneously against the points of entrance of the superior laryngeal nerve into the thyro-hyoid membrane was resorted to, but not found in this case to afford any material advantage over the simpler expedient of directing the patient to suck lumps of ice some time before the operation. Dr. Semon stated that he had brought these cases before the Society because they practically proved certain qualities of laryngeal growths, such as multiplicity, subglottic position, tendency towards frequent and quick recurrence; and, again, excessively large size, broad base, and great hardness, which were generally looked upon as so many contra-indications against the performance of any endo-laryngeal operation, are in reality no serious obstacles to endo-laryngeal interference even if several of these occur together. He discussed at some length the comparative advantages and disadvantages of extra- and intra-laryngeal operations in cases of benign laryngeal growths, showing that thyrotomy gave no guarantee against recurrence of papillomata, and that this operation in itself, as conclusively shown by Paul Bruns, was very dangerous to the vocal function. He admitted that the galvano-caustic method ought not to be used in the larynx as long as the same ends could be achieved by simple methods, but maintained that in such cases as the two brought forward, it was of the highest value. On the whole, he maintained that no hard and fast rules could be laid down which should govern our decisions as to the choice of the method in every given case of laryngeal growths. He thought that no extra-laryngeal operation for the removal of benign growths should be performed unless an experienced laryngoscopist had unsuccessfully attempted endo-laryngeal removal.—Dr. G. JOHNSON, who had seen the first case described in the paper, when in an early stage and also after the treatment, congratulated the author upon the complete success of his operation. It was a case of unusual difficulty, for the growths were multiple. In a paper published in the Society's Transactions some years ago, Dr. Johnson related cases of removal of laryngeal growths, in each of which the tumour was single. The cure effected by Dr. Semon appeared to be quite complete, the only trace left being a slight irregularity of one of the vocal cords. The case showed in a striking way how much may be done by the endo-laryngeal operation when judiciously and skilfully treated. He expressed a strong preference for this method to that of thyrotomy, although the treatment was prolonged, and called for much skill on the part of the operator and steadiness on the part of the patient.—Dr. DE HAVILLAND HALL had seen both the cases, which were unusually difficult owing to the sessile character of the growths. In the second case the dyspnœa was so extreme that he thought tracheotomy would have to be done, but the patient was quiet and tolerant of operative interference. The removal of the first portion of the growth in this case gave much relief; and now that the whole tumour has been ablated the result is admirable; there is no dyspnœa, and the voice is good.—Dr. D. POWELL asked the author if he thought the application of the galvano-cautery in the first case had any influence in causing the atrophy and absorption of some of the growths; for if so, it might be necessary in the case of small disseminated growths to apply the cautery merely and not to attempt the removal of each one separately.—Dr. SEMON, in commencing his reply, said that since he had written the paper he had learnt from Mr. B. Hill, and had confirmed the fact himself, that the credit of the first introduction of the galvano-cautery into practice did not rest with Middledorf of Breslau, as commonly believed, but with the President of this Society, Mr. Marshall, whose paper in the Transactions upon the cautery appeared long before Middledorf's. In reply to Dr. Powell, he did not think that any absorption was produced by the cautery; the growths remained until they were each actually seared by it. His main object was to show that the endo-laryngeal method is available under conditions generally held to contra-indicate it. The question was now being raised whether frequent operations might not so irritate benign growths as to cause them to take on malignant characters. He firmly believed this could never be so in cases of truly benign tumours; but in certain cases whether interfered with or not, growths show a tendency towards malignancy. He exhibited that evening a man, forty-six years old, from whose larynx Dr. Johnson removed a papilloma fourteen years ago. After that long interval a recrudescence had occurred, with dyspnœa, &c. The growth had still no malignant characters, and he (Dr. Semon) had removed it again. It was possible that part of it might be malignant; if so, he would not continue methods which would only irritate it to further growth. The objection that the treatment is of long duration would have less force the more these operations were practised; and in support of this he mentioned a case in which he had relieved great dyspnœa after operations lasting over only five days. Thyrotomy did not secure the patient against recurrence; the vocal function was only secondary to the danger from dyspnœa; and many patients are unable to follow any pursuit in consequence of being obliged to wear a cannula. Therefore he urged the adoption of the rule laid down by Bruns—that no extra-laryngeal operation should be had recourse to in cases of benign growths unless a laryngoscopist had failed to remove them through the larynx.

The next paper read was on Thyrotomy for the Removal of Foreign Bodies impacted in the interior of the Thyroid Cartilage, by Mr. T. HOLMES, of which the following is an abstract:—This paper relates the history of a case in which a large and rough piece of rabbit-bone was impacted in the neighbourhood of the left vocal cord for seven days before its removal. On the failure of attempts to extract it with the laryngeal forceps from the mouth, laryngeo-tracheotomy was performed on the fifth day, and as the bone was still immovable the thyroid cartilage was divided on the seventh day, when the piece of bone was at once extracted. The patient had suffered rather severely from inflammation of the mucous membrane of the larynx and trachea before the operation, and this did not subside after the operation, but spread gradually down to the lungs, until finally a gangrenous abscess formed in one lung, and the patient died nine weeks after the operation. Post-mortem examination showed evidence of intemperate habits, which was, indeed, also known from the patient's history. The voice had almost entirely returned before the patient's death, and the wound had contracted to a very minute fistula. The parts concerned in the operation were exhibited, and show hardly any unnatural appearance. There is slight ulceration of the left vocal cord, caused by the foreign body, and a very minute perforation still existing in the thyroid cartilage above the glottis; but the wound, which extended from the upper border of the pomum Adami to the second or third ring of the trachea, is represented only by a faint line of union, and the vocal cords show no sign whatever of having been interfered with. The general subject of the indications for thyrotomy, the method of perforating it, and its results, in cases of impacted foreign bodies were discussed, and the following conclusions were arrived at:—1. Very large substances may be impacted either in the ventricle or between the alæ of the thyroid cartilage without causing any symptoms of immediate urgency. 2. When such substances are rough or pointed they sometimes give rise to a spreading inflammation of the mucous membrane, and in such cases should be removed as soon as possible. 3. If they can be seen and touched they can usually be removed from the mouth, either whole or piecemeal. 4. When this is found impossible without tracheotomy, an opening should be made through the crico-thyroid membrane and upper rings of the trachea. 5. After this operation, it is quite possible that the spasmodic condition of the parts about the glottis may subside, and a renewed attempt at extraction be successful. 6. If this is impossible, the foreign body may perhaps be either extracted or displaced from the tracheal wound, so that a preliminary tracheotomy is always advisable. 7. On the failure of such attempts the thyroid cartilage is to be laid open in the middle line, partially from below upwards, if the body is small and can be felt lying near the wound, entirely and from above downwards if the body is large, firmly impacted, and lying out of reach from the tracheotomy wound. 8. The operation of thyrotomy involves little danger to life, and not much to the integrity of the voice, at least the risk of damage to the vocal cords is much greater from the protracted irritation of the foreign body than from the operation.—Mr. DURHAM said that he had been waiting for cases like that of Mr. Holmes's to supplement a paper he had read before the Society some years ago, on Section of the Laryngeal Cartilages for the Removal of Growths, by one dealing with

the subject of removal of foreign bodies. He had had two cases of this class. In one a cherry-stone was impacted in the larynx, necessitating immediate tracheotomy. After repeated attempts at its removal through the larynx, he had to lay the larynx open to remove it. The stone was lodged in the middle of the passage and covered by the false cords, whilst the true cords were inflamed and swollen beneath it. A rapid recovery took place. In the other case a bone had been impacted for three weeks before the thyroid was divided to effect its removal. The dictum quoted by Dr. Semon was applicable to foreign bodies as well as to growths—viz., to delay incision of the larynx until attempts at removal *per vias naturales* had failed. Persistence in such attempts, however, involved risk. He had never intended to advocate thyrotomy as a substitute for endo-laryngeal methods; but he strongly deprecated exaggeration of the dangers of thyrotomy. It would be found that the fatalities after the operation were due to the disease for which it was performed, and not to the operation itself. The term "thyrotomy" was inapplicable to a large number of these cases, for the thyroid was seldom the sole structure divided; and he suggested "laryngo-chondrotomy" as a better term.—Mr. CROFT had only once had occasion to perform this operation for the removal of a foreign body—viz., a piece of walnut shell which had been impacted for three weeks. He did not think that the period at which the operation was performed in Mr. Holmes's case was of much influence in determining the fatal result, but rather that some blood might have entered the air-passages during the operation and set up the pneumonia. In his case he used the tampon employed by Dr. Foulis in extirpation of the larynx.—Mr. MARSH instanced a case of tracheotomy in a child three years old in which it was found necessary to divide the thyroid cartilage in the middle line without any ill result.—Dr. SEMON thought all laryngoscopists would subscribe to what Mr. Holmes had said, especially if the foreign body be sharp-edged. In the case referred to by Mr. Croft the long impaction of the foreign body had resulted in anchylosis of the crico-arytenoid articulation; and the glottis was so small that the patient, a young lad, would never be able to exist without the cannula.—Mr. HOLMES, in reply, pointed out that the foreign body in his case was of enormous size, and it was found quite impossible to remove it *per vias naturales*. Evidently the sooner the body is removed the better, although there are cases of long-standing impaction on record, one in which a foreign body was lodged in the larynx for more than a year. In this case, however, the few days' delay, not longer than was reasonable, seemed to be disastrous, and was probably due to inflammation spreading down the trachea in an unhealthy subject. He could not accept Mr. Croft's view of the origin of the pneumonia. Less blood entered the trachea than in an ordinary tracheotomy, and the tampon used (Semon's modification of Trundlenberg's) was far better for the purpose than Foulis's. The abscess formed in the lung seven or eight weeks afterwards, and, therefore, could not have been due to putrefaction of blood. The specimen showed how perfect is the repair after thyrotomy. He could not help thinking that in Bruns' statistics the number of ill results was due rather to growth left behind than to the operation. In cases operated on for removal of foreign bodies, the crico has been restored in its integrity.

At the request of the President, Mr. Watson Cheyne, Mr. Horsley, and Mr. Dowdeswell then briefly described the nature of the specimens of septic organisms contributed by them; and the meeting adjourned.

CLINICAL SOCIETY OF LONDON.

Hyperpyrexia.—Acute Rheumatism.—Prurigo.—Ichthyosis.—Lupus-psoriasis.

THE last meeting of the present session of the above Society was held on Friday, May 26th, Joseph Lister, Esq., F.R.S., President, in the chair. Several communications were made to the Society, the most important of which was an abstract of the report of the Committee on Hyperpyrexia, which was read by Dr. Coupland, and will be found on page 929. The President announced that all illustrations intended for publication should be sent in to the secretaries at once. At the close of the meeting he congratulated the Society on its success during the past session, and drew attention to the fact that the subjects brought before it had been in the large majority of cases surgical.

Dr. COUPLAND read an abstract of a paper on Cases of Rheumatic Fever treated with Iodide of Potassium and Sulphate of Quinine, by Dr. GREENHOW. It comprised notes of forty-three cases of rheumatic fever which were under the author's care in the Middlesex Hospital between the beginning of 1875 and the summer of 1876; they were all treated as nearly as possible in an identical manner, the medicines always being administered in the same form. The iodide of potassium was prescribed in a simple solution containing five grains each of iodide of potassium and carbonate of ammonia and the sulphate of quinine in the form of a pill, consisting of two grains of sulphate of quinine and three of extract of henbane. All the patients were kept in bed and restricted to milk diet and beef-tea until the pains and fever had entirely abated; the painful joints were closely enveloped in cotton-wool; and whenever any cardiac complication was present a mixture of equal parts of extract of belladonna and ointment of iodide of potassium was applied over the præcordia. Sedatives, aperients, and stimulants were only administered when they appeared indispensable, and always as sparingly as possible. Three illustrative cases were read. The cases recorded varied greatly in character and intensity; none of the patients passed into a state of hyperpyrexia, nor manifested any symptom of cerebral rheumatism. Pneumonia or pleuro-pneumonia only supervened in three cases whilst under treatment, and, including the one fatal case, existed on admission in only two cases. Twenty-six of the patients showed signs of pericarditis or endocarditis, or both when received into the wards; similar affections arose after admission in only six cases. Due allowance being made for the probability that some of the patients had suffered from poisonous attacks of rheumatism, and even may have been the subjects of cardiac disease before the accession of their recent attack, it would appear that cardiac complications occurred in at least one-half the cases. Single relapses, all of short duration, occurred in nine cases. Albuminuria already existed on admission in eight cases, and became developed in two after admission. In all these cases it may be looked upon as having been a complication of the rheumatic fever, and not as an independent condition, for, the single fatal case alone excluded, the urine became perfectly normal in them all as recovery took place. Albuminuria and pneumonia were both present in three cases, and were simultaneously developed under observation in one case. Delirium was observed in five cases; epistaxis in five cases, in one of which it occurred before the commencement of the special treatment; in another case it recurred several times, and in a third was so profuse as to necessitate plugging the nostrils. Marked depression of the heart's action only happened in three cases. In the last of these cases the patient had been already under treatment, by which the symptoms of rheumatic fever had been suspended at the time of her admission into the hospital in a state of alarming collapse. As this subsided the rheumatic fever relapsed. None of the patients took more than eight grains of sulphate of quinine and twenty of iodide of potassium in the twenty-four hours; in a few cases less was given. In two cases the treatment was discontinued, in one case because of the occurrence of an aphthous condition of the mouth and fauces; in the other on the development of an attack of acute pleuro-pneumonia, over which the treatment appeared to exercise no control. In three cases there was a delay of from three to seven days in commencing the special treatment. The pains and fever usually subsided together in the uncomplicated cases. In twenty cases the pains ceased, and the temperature became normal within five days from the commencement of the special treatment. In three other cases the pains continued for some days after the temperature had fallen to the normal; but in none of the uncomplicated cases did the fever continue after the pains had ceased. In two very acute cases the pains and fever ran on for eighteen and twenty-one days respectively; in another very acute case, with profuse epistaxis, the pains and fever lasted for fifteen days, and in another case, attended by purpura, for twelve days. Twelve cases were in the hospital for from six to eight weeks. Excluding the two cases in which the treatment was soon discontinued, and seven very mild cases, the remaining thirty-four cases were on the average each thirty-six days in the hospital. In conclusion, Dr. Greenhow states that his experience of this treatment contrasted favourably with that of salicine and salicyate of soda. But it was necessary to compare it with the results of some very simple

treatment which he hoped to be able to communicate to the Society.—Dr. GLOVER said they must feel indebted to Dr. Greenhow for the way in which he had directed their attention to the treatment of acute rheumatism and the great time he had devoted to the question. Dr. Glover thought it to be regretted that in the present series of cases two remedies so different in character had been used simultaneously, so as to make it difficult to draw any definite therapeutical conclusion. Speaking as a private practitioner, he believed that quinine was only less effectual, if indeed less, than salicine, which, with Dr. Maclagan, he preferred to the salicylates. The action of these remedies in rheumatic fever he regarded as one of the most interesting and significant chapters in therapeutics. He thought quinine often effectual in cases where salicine failed, and *vice versâ*. It was best given in form of pill, or with effervescing citrate of potash.

Dr. RADCLIFFE CROCKER read the account of a case of the Prurigo of Hebra which he had shown at a former meeting. He also showed another case of this disease, a girl, eight years old, to demonstrate the great improvement and, indeed, apparent cure produced by appropriate treatment, but which, judging by previous experience, would prove to be merely a temporary amelioration, the disease returning nearly as bad as ever when treatment was left off in cold weather, though through the summer she might keep fairly well. The other patient was a girl, aged nine years, with good general health. The disease began when she was six months old with wheals and vesicles, which became sores. The characteristic papules began when she was between two and three years old; but the disease did not attain to its worst until she was seven years old, since which there has been no marked change in her condition, though temporary ameliorations have occurred in the summer. The itching is at times most intense, and she presents in a marked degree the other symptoms described by Hebra:—1. Pale-red slightly raised papules with scabbed tops, on the extensor surfaces especially of the forearm and leg, the skin being thickened and slightly pigmented. 2. Eczema varying in extent at different periods, but always absent from the flexures of the limbs. 3. Wheals developed in proportion to the scratching. 4. Occasional ecthymatous sores. 5. Enlargement of the lymphatic glands in various parts. The treatment that gives most relief is alkaline baths, tar ointment well rubbed in, good food, iron and cod-liver oil; and last, but not least, Dr. Crocker had found tincture of cannabis indica gives material relief to the itching; and most of the lesions of this disease were consequent upon the insatiable desire for scratching. Dr. Crocker was of opinion that if the distinctive symptoms taken collectively were borne in mind, and cases looked out for, the disease would be found to be not very uncommon in this country.—Dr. SOUTHEY asked whether Dr. Crocker had made any observations on the urine of his patients, and whether he was able to confirm Hebra's statement that in this disease indican was present in the urine in great quantity, from the destruction of blood-corpuscles, and that the motions were scanty, scybalous, and contained small portions of lymph.—Dr. THIN alluded to the fact that a German professor had recently stated that he had cured two cases by pilocarpine. He believed that the first case of this disease recognised in this country was the one utilised by him for some observations on the effects of severe skin diseases on the number of red blood-corpuscles, which were published in the Medico-Chirurgical Transactions. Since then he had seen several examples of the disease in London, especially in children.—Dr. CROCKER, in reply, stated that he had not tested the urine for indican. In his patient constipation was not a marked symptom, and it was well known that in many conditions attended with constipation indican was found in the urine, and he did not, therefore, regard Hebra's observations as especially applying to this form of prurigo. He had not tried pilocarpine, as cannabis indica was so successful, as it was also in other cases of itching.

Dr. BERNARD O'CONNOR illustrated his remarks on Ichthyosis involving the entire surface of the body by exhibiting two sisters, aged respectively twenty-nine and twenty-seven years, presenting universal and congenital ichthyosis. The elder one had been under his treatment during the preceding months. She was brought before this Society early in March last, when the characteristic scales covered the entire surface of the body, including the palms of the hands and the soles of the feet and, though to a less extent, the eyelids and forehead. The family history, as far as could be obtained, was good. No cutaneous affection had ever been known in either the father's or the mother's family. The patient is the second born of a family of seven. The eldest is a son; the remaining five children are daughters. The patient and the second daughter were born with the affection. The fifth also had it, but whether born with it or not is uncertain; she died at the age of nine months. The three remaining girls were unaffected. No particular odour was observable on the surface of the body. The unaffected portions of the face, the palms and the backs of the hands, especially the latter, perspired freely. No perspiration was ever discovered in any other situation. During the few days preceding the catamenia scales always fell off in abundance, particularly when the patient was in bed, but other scales immediately appeared in their place. Her general health was found to be excellent, though a scrofulous aspect was noticeable. Prior to coming under recent treatment she had never been more susceptible to the influence of cold than are the majority of individuals, but lately, since the scaliness has diminished, she has complained of the changes of temperature. The scaliness all over the surface has now diminished; the face is perfectly free. The affection on the neck is reduced to a mere roughness. The forearm, wrists, and hands are clear, and the front of the chest, though leathery to the touch, no longer presents the imbricated appearance noticed three months ago. Dr. O'Connor then referred to the treatment. Jaborandi had on a few occasions caused a profuse shedding of the scales; warm baths and emollient applications, lotions containing borax, glycerine, &c., rendered the surface softer; blistering acted as on a normal skin, but the ichthyotic condition was quickly renewed. On the whole he placed no reliance on external treatment. Arsenic (combined with iron), and cod-liver oil, internally, were the means which he has found most serviceable. Ichthyosis resembled some other disorders (such as pseudo-hypertrophic muscular paralysis, colour-blindness, the hæmorrhagic diathesis, &c.) in that while it generally appears in the sons, it descends through the daughters of an affected family.

Dr. STEPHEN MACKENZIE read notes of a case of Lupus-Psoriasis. The subject of the eruption was a lad nineteen years of age. There was no history elicited of struma or of skin diseases in his family. The disease began in his face three years ago, and was confined to this position until nine months before he came under observation. It then spread to the forearms, and gradually involved the upper arms, the trunk, and lower extremities. The patient was well nourished, free from any sign of glandular enlargement, visceral or bone disease. When he came under observation his face presented the characteristic appearances of lupus vulgaris. In addition to this, however, on the upper part of the chest in front, between the shoulders and over the lower part of the back, and symmetrically distributed on the outer aspects of the arms and forearms, on both buttocks, thighs, and legs were discs having depressed centres, and a few fine scales, intermixed with dull red scars. The skin of the extremities of the fingers was red, rough, and cracked, and there were a few papules on the dorsa of the feet. The patient under one-drachm doses of citrate of potash, and later iodide of iron, with arsenic, improved somewhat, but perionychitis became troublesome, and led to erysipelas of the right arm. The attack was severe, but the patient made a satisfactory recovery, and the eruption continued to improve. Later, when the description of the case was concluded, a good deal of the active eruption had subsided from the trunk and extremities, leaving scars in the positions in which it had occurred. His general health was good. The points to which attention was directed were, that the eruption on the face was characteristically lupus; that the eruption on the trunk and extremities resembled psoriasis in its scaly appearance and symmetrical distribution, but unlike psoriasis, and like lupus, it left scars. Hence the name lupus-psoriasis given to the condition by Mr. Hutchinson seemed appropriate in characterising its nature and distribution. The condition is a rare one, and, as far as the author was aware, was only described by Mr. Hutchinson. A sister of the patient has since been seen who has slight but well-marked psoriasis. This brings the lupus element of the case into closer alliance with psoriasis as regards its essential nature, as well as in its appearance.—Dr. CROCKER thought it a pity that the term lupus-psoriasis should be used for this disease, which was in truth a variety of lupus, and should be named accordingly.—Dr. THIN asked if the disease resembled

lupus erythematosus, and if so, how it was to be distinguished from it.—DR. STEPHEN MACKENZIE replied that the disease resembled both lupus and psoriasis, and he did not see that it was better to call it psoriasis-lupus than lupus-psoriasis; it was in fact a hybrid of the two affections. The lupus was erythematous in some positions and the patient was subject to chilblains.

Dr. CHURTON (Leeds) communicated the sequel to a case of Double Hæmorrhagic Pleurisy, with formation of cholesterine, read to the Society in November. The patient was then recovering from a right empyema, and the left pleura seemed free from fluid, although dulness and absence of breath-sounds persisted in the lower axilla. Serous fluid now collected the temperature remained high, and he lost flesh. A few days after his return from Scarborough (Nov. 25th) aspiration of the left chest evacuated some pus, and on Dec. 8th a free incision was made, the operation being performed antiseptically, except that the spray was not used. Much pus containing cholesterine was evacuated, but the subsequent discharge was scanty and offensive; the right empyema was then healed. Signs of septicæmia set in, and he died rather suddenly on the sixth day after operation. At the autopsy a thick layer of old degenerated cells and lymph containing cholesterine was found in the floor of the left pleura, but there was no fluid pus. A few small nodules occurred at the apex of the lung, which was considerably compressed. The origin of the cholesterine was explained by the fatty degeneration of these cells accumulated in former attacks of pleurisy. No such deposit of cells was found on the right side, where the lung was universally adherent. A few small nodules also occurred in the apex of this lung, but no miliary tubercle, the case thus disproving Fraenkel's assertion that double hæmorrhagic pleurisy is almost certainly of tubercular origin. In the anterior margin of the liver was a caseous mass the size of a marble, otherwise the organs were quite healthy. — Mr. LISTER hoped that before the paper was published Dr. Churton would state whether the spray was the only detail of the antiseptic treatment which was omitted.

Mr. WALSHAM showed a case of Excision of the Wrist performed last summer for traumatic arthritis.

Dr. ALTHAUS showed a man with Cerebro-spinal Syphilis whose case he related at the previous meeting.

The Society then adjourned.

THE LATE BASUTOLAND WAR: AID TO THE SICK AND WOUNDED REBELS.

(*From an occasional Correspondent.*)

DIRECTLY hostilities ceased between the Cape colonial forces and the rebel inhabitants of British Basutoland, I availed myself of an opportunity of ascertaining how our wounded enemies fared during the fighting; and herewith I beg to send you a short account of the result. But before doing so I must inform you, in the first place, that I made inquiries as to the truth or otherwise of a report which reached our camp, to the effect that "a French surgeon had extracted a pailful of bullets from wounded rebels during the progress of hostilities." I will dispose of this part of my inquiry at once by stating that there was a shadow of truth in the report—rather an unusual circumstance, I admit, as regards the general character of such rumours in South Africa—for the pail proved to be about the size of a soda-water tumbler. The sick and wounded rebels were treated by Dr. Cassalis, the French medical missionary in charge *pro tem.* of the Protestant Mission Station at Morija, Basutoland, and the available buildings of the station were turned into a temporary field hospital.

As position is everything in war as well as out of it, Morija happened to be remarkably well suited for the purpose of a base hospital, being within reasonable and safe distance from the two chief fields of action—viz., Bolika Ridge and Maseru. Dr. Cassalis informed me that he had the able assistance of his brother lay missionaries; that he performed several capital operations; that he extracted "lots" of bullets and fragments of bone; that few died of their wounds in hospital; and that some remarkable recoveries took place. It will be remembered that the native races of South Africa do not suffer from collapse like European wounded soldiers. In proof of this, I may here mention that it is by no means an unusual circumstance for a severely wounded native to drag himself from under fire to a place of shelter, and at once try to extract or "dig out" the bullet from his wound; and I know that their efforts were frequently crowned with success. Others have been known to try to "hack" off their shattered limbs. I quote an interesting instance of the former:—A Basuto chief had a bullet lodged deeply in the thick part of his thigh (upper third); he immediately took a steel ramrod from a gun, probed for it; finding it, he made a counter-opening down to it, a native keeping the point of the said rod firmly upon the bullet; then with the cup-shaped end of the probe he forced the ball out through the counter-opening. This man made a speedy recovery. The poor fellow who tried to amputate his own limb died in the attempt.

At one stage of the war it was reported that the rebels were using explosive bullets, but I could not hear anything to confirm this report; and one Basuto rebel chief flatly contradicted it. It was estimated that there were about 15,000 rebels under arms opposing the Cape colonial forces; this quotation is given to enable you to form some idea of the amount of work that must have fallen upon Dr. Cassalis and his brother lay missionaries, for there was no other medical or surgical aid to be had within the rebel district.

I regret to add that there was one circumstance which threatened seriously to cripple Dr. Cassalis's usefulness, and which appeared to have been taken advantage of to taunt the victorious foe into haughty submission. This latter remark is merely a matter of opinion, and was a subject of conversation. It is as follows:—One time the stock of medicines, medical comforts, surgical appliances, &c., ran short at the Mission Hospital, and a fresh supply being forwarded from the coast, on arrival of the goods at Brigadier-General Clark's column—i.e., the column commanding the direct road to Morija—Dr. Cassalis politely asked permission for the articles to be allowed to pass on under a flag; but, strange to say, this permission was refused. However, I am glad to report that the delay, although causing much trouble and inconvenience, and perhaps misery, was not for long, as another road was easily found, and the supplies reached Dr. Cassalis in safety. The General's reply to Dr. Cassalis's request, I hear, contained a set-off to the effect that the rebel sick and wounded could be sent to the Cape Colonial Field Hospitals, where they would receive every attention and kindness from the medical officers. However, this offer was not accepted by our unconquered enemies.

VENTILATION OF SEWERS.

To the Editor of THE LANCET.

SIR,—I have read with much satisfaction your excellent article on the "Ventilation of Sewers," in your number of May 27th, perfectly agreeing in your condemnation of the method adopted in this town and many others of discharging the foul gases of the main sewers through open gratings in the centre of the streets, instead of, as you suggest, through pipes carried above the bedrooms or roofs of the highest houses, where they would not be recognised or prove injurious to health. The gases are now becoming pretty generally shut out of our houses, by means of pipes fixed into the branch sewer at the point where it leaves the house, the pipe being carried above the roof of the house. The calibre of the pipe is, however, as a rule, much too small, and its upper opening has no contrivance to prevent the atmosphere, especially in windy weather, from checking the discharge of the gases. I beg, therefore, to draw your attention to the patent ventilator and chimney cowl invented by me, which not only facilitates the issue of the foul gases by its suction power upon the interior of the pipe, but by its dome or cover relieving the gases from any downward atmospheric pressure. The invention is very simple and inexpensive; and I feel confident, if made generally known, would be largely used, and afford much satisfaction.—I am, Sir, your obedient servant,

ALFRED HALL, M.D., F.R.C.P.

Brighton, May 29th, 1882.

*** The chimney cowl referred to by Dr. Hall was noticed and commended in THE LANCET of September 18th, 1880, p. 462.—ED. L.

THE LANCET.

LONDON: SATURDAY, JUNE 3, 1882.

THE large number of rejections at this examination during the past two or three years has again given rise to much comment in the medical schools which send up the greater number of the candidates. Dissatisfaction is expressed by the teachers as well as by the students. The old complaint is again heard, that no candidate, however well prepared, and no matter what attention he may have given to the subjects, can feel reasonably sure of passing the examination. In some cases inferior candidates pass, whilst the best students are rejected. Although it may be difficult to exactly determine the cause of so many, and in some cases so unexpected, rejections, it is obvious that they are far more numerous in proportion to the number of candidates than at any similar examination at the other examining bodies. The students who present themselves, moreover, are the picked men of the metropolitan and provincial schools, and have devoted at least three years to an almost exclusive study of anatomy and physiology. Many of the candidates for the First Fellowship have passed the First M.B. Examination of the University of London or the Second M.B. at Cambridge, whilst others are scholars, prizemen, assistant demonstrators, and prosectors at their schools. Sometimes the anatomical, at others the physiological, part of the examination is blamed. At the recent examination, however, the condemnation of the questions set in anatomy was almost unanimous, and it has even been suggested that the only object in setting a paper of such range and difficulty, to be answered in three hours, is to minimise as far as possible the number of the candidates who should be allowed to pass. To a certain extent we sympathise with the complaints that have been made. The questions were:—

"1. Describe the various forms of the human skull. What methods have been adopted for the estimation of differences in form and size?

"2. Describe the veins in the cavity of the thorax. Explain their arrangement by their developmental history.

"3. Describe the manner in which the bones of the pelvis are ossified. Point out the distinctive peculiarities of the pelvis at birth, and the changes in shape which it undergoes prior to its complete development. Contrast the well-formed human pelvis with that of the quadrumana.

"4. The skull-cap and brain having been removed, give the dissection required to expose the nasal nerve and its branches throughout their course."

For full replies to such a paper six hours are necessary, and even if any three questions be chosen they cannot be answered in less than four hours. The selection of the questions also seems to us far from judicious, as in only one of them would the extra course of *practical* anatomy be of any service to the candidate; the others would be more readily answered by those who had not really devoted a third winter to dissections, as is required by the regulations, but had acquired their knowledge by book-work only. The first question is quite outside the range of the student, even if he be working for an advanced examination. The subject has been studied by a few scientific anatomists and anthropologists only, who "in this country unfortunately," as stated by Professor FLOWER at the late Congress, "may be counted on the fingers of one hand." If the Fellowship is to maintain its character as a practical examination, such questions should be eliminated, for the effects of a test of this kind must necessarily be most capricious. Another hardship of which candidates justly complain is the erratic manner in which questions of comparative anatomy are introduced. If this subject is an essential part of the examination, the amount required should be strictly defined and scheduled, and a special examiner who is thoroughly versed in the subject be appointed to conduct such an examination, and be responsible for its results. If it is not deemed an essential, no question thereon should be permitted in the examination paper. Questions introduced at random by examiners qualified in human anatomy only are especially open to objection. Many improvements have been made of late years in this examination, but there are still faults which must be remedied before it can be considered altogether satisfactory. The examiners must recognise that the diploma of the Fellowship is a necessity for the surgical appointments at our chief hospitals, and that their only object should be to secure a thoroughly practical knowledge of anatomy and physiology, so that the candidate may develop into a representative surgeon. At present they seem rather to aim at the production of scientific anatomists and physiologists.

THE Report of the Clinical Society's Committee upon Rheumatic Hyperpyrexia, of which an abstract is printed in another column, might, perhaps, have received more attention had it appeared a few years ago, when, as the Committee truly point out, there was a very remarkable prevalence of this complication, at least in the London hospitals. Since, however, we are still ignorant of the conditions that produce it, there is no reason for believing that hyperpyrexia will not still continue to complicate the disease, and it may at any time become as prevalent as it has been before. If this be so, the labours of the Committee will not have been in vain, and their conclusions, which at this present time might be ignored by many, may in the future be found of no little service. The Report is an interesting and important contribution to the subject, and would, perhaps, have been more valuable had the Committee extended their inquiry further than they did, and included in their analysis cases which have been previously published, some of which are, indeed, of historical interest. On the other hand, something may be said for the limitation of the inquiry to the ten years stated in the Report, for it is now more than that period since the publication in THE LANCET of the well-known paper by Dr. WILSON FOX, which was almost the first attempt to arouse the attention of the profession to the valuable aid obtained by the cold bath treatment in combating this formidable condition. In submitting to careful scrutiny a considerable number of cases, and especially in their analysis of the results obtained by this treatment, the Committee, which was nominated by the late President of the Society, Dr. GREENHOW, may be considered to have followed up the work so ably initiated by Dr. FOX. It

will probably be found that no very great advance has been made in the knowledge of hyperpyrexia since his essay, although certain facts have doubtless received increased significance. Some disappointment also may be not unnaturally felt that the theoretical aspect of the question has not been handled by the Committee. We should like to have been in possession of a reasonable view of the supposed cause of these unexpected departures from the normal and regular course of acute rheumatism, and can only infer from their silence that the Committee had nothing to add on a question that must still remain one of pure speculation. Their statement, too, that hardly any cases have been personally observed by them since their nomination, is a further justification for their reticence upon the pathogenic side of the subject.

Before thermometry was applied to clinical research there were cases of this class recorded. Writers upon acute rheumatism describe fatal cases marked by delirium and typhoid symptoms, sometimes setting in with the signs of pericarditis, sometimes without any such complication being present. The phrase "cerebral rheumatism" was employed by TROUSSEAU to denote such cases, and the doctrine of metastasis was invoked to explain the phenomena. The view of a cerebral metastasis was further strengthened by the frequently observed fact of the subsidence of pain and sweating coincidently with the onset of the nerve-symptoms. But when exact records of temperature in disease were made, a fact more remarkable than any others was found to characterise the large majority of these anomalous cases. It was the fact of hyperpyrexia, as it is termed—the sudden leaping up of the temperature to extreme heights—with a tendency to a speedily fatal termination. Nothing better could be found to compare with this abrupt and baneful departure from the normal than the rising temperature in the death-agony of certain diseases and injuries of the nervous system, or the phenomena of heat-stroke or insolation. How these conditions could be approximated to those prevailing in acute rheumatism is a problem to which answers have been sought but never yet satisfactorily given. Moreover, other acute febrile diseases are known at times to run a hyperpyrexial course, and the task originally set this Committee was meant to include their investigation also. Although the Committee, dealing with rheumatic fever only, do not bring into prominence any views as to the dependence of the hyperpyrexia upon nerve-disturbance—i.e., a derangement of the heat-controlling centre from some unknown cause, metastatic or other—although they do not commit themselves to any categorical statement upon it, yet the manner in which the Report is drawn up and the facts analysed show that the statements upon these matters have received due attention. Thus it may be gathered that nervous symptoms of one kind or another appear in the majority of cases; and, taking delirium as the most frequent of all these symptoms, they show that in a certain number it precedes by a longer or shorter interval the onset of the hyperpyrexia; in other cases the two phenomena are coincident; in yet others the delirium arises after the temperature disturbance has passed away. The most significant fact is that the first of these three sets of cases would appear to be those where recovery is least to be hoped for, but we must wait for the full publication of the Report before we can ascertain whether in these cases the hyperpyrexia itself was of greater severity than in the others. Again, some cases are quoted in which no delirium was present at all, and this negative fact goes some way to establish a difference in etiology between different examples of hyperpyrexia.

Although no such differences are adverted to, another fact noted in this Report seems to suggest their presence. We mean the existence of pericarditis in an unusual proportion. It is quite conceivable, and in harmony with older observations, that in some cases the supervention of this inflammation, and perhaps in some cases of pneumonia also, may be marked by a great perturbation in temperature and in the nervous system. The question at present is capable neither of proof nor disproof, but it is well worthy of consideration. Hyperpyrexia is only one symptom, and it apparently depends on more than one ultimate cause. Its immediate antecedent doubtless is a disturbance of the "heat-regulating centres"; pyrexia itself is probably largely so produced, and its irregular exacerbations may be expected to be similarly evoked. But this disturbance may be excited in many ways; sometimes by a true metastasis, sometimes by actual embolism, sometimes by the supervention of an acute local inflammation, and by other channels of which we have no present knowledge. If this be granted it will be seen how difficult it would have been for the committee to thoroughly sift the question upon the material before them, and they adopted the wiser plan of simply stating facts, and abstaining from inferences which could only be partially true.

The comparison of hyperpyrexial with ordinary rheumatism serves to show that except in a few points, such as the period of its greatest prevalence, the sex of the subjects attacked by it, the relative excess of certain complications, and its greatly heightened mortality, hyperpyrexia is not associated with many notable features of difference. Such departures from the average that the hyperpyrexial cases do exhibit should, however, be most carefully scrutinised as tending to throw some light upon the conditions that give rise to it. The unwonted prevalence of hyperpyrexial cases in certain years, and their unequal distribution in various seasons of the year, suggest the intervention of conditions external to the patient; whilst the large proportion of cases amongst males, and the greater frequency of hyperpyrexia in a primary attack of rheumatism, point to far different influences. All these points of difference are but slight as compared with the general lines of agreement, and, without losing sight of the former, it must be admitted that the appearance of hyperpyrexia is one of the most abrupt, sudden, and inexplicable phenomena with which we are acquainted in the whole domain of disease. It must have an antecedent or antecedents, and must be accompanied by material change, but neither the remote nor the immediate antecedents are fully known, and post-mortem investigation (so far as it has gone) shows no structural change that is common to all cases.

If, however, there be such uncertainty as to the precise derangement of mechanism that underlies the phenomenon, there is no question as to the best means to be taken to combat it; and we commend to especial notice the conclusions regarding the treatment by the external application

of cold. The report shows unmistakably the advantage of this measure. It shows also that it is useless to temporise, and that the greatest success has occurred when the treatment has been commenced before inordinate heights of temperature have been attained. These deductions confirm those of other physicians who have written upon the subject, and who have insisted very strenuously upon the value of the prodromal signs, which occur in many (unfortunately not all) these cases. To some it may seem that a recommendation to resort to a bath when the temperature reaches 105° is to advise an extreme measure before the absolute necessity for such intervention arises. We confess that we do not see that the Committee had any other alternative in the face of the facts before them; for although many cases may not pass on to greater heights of temperature, others with even less thermic disturbance will succumb. Besides, no one can doubt that the treatment has saved life, even in the most desperate cases, and this being so it is not right to shrink from carrying it out at a period when the chances of recovery are greater, and the ill effects of heightened temperature have not become manifest.

WE have received a Report of the opening of a Hospital for Women and Children in Calcutta by Sir ASHLEY EDEN. It appears from this Report that the hospital is to form a School of Midwifery in connexion with the Calcutta Medical College. It will, moreover, serve to relieve the pressure on the Surgical Hospital of the College, caused by the great demand for admission into its wards, for in future women and children will be treated in the new hospital, and the wards of the old building will thus be rendered more efficient and healthy. The hospital just opened will, in fact, form a new residence for an old department of the Medical School. At first sight it might be taken for a special institution, but in reality it is only a new building for the practice of a branch of medicine which has always been taught practically and theoretically in the Medical School. This is the relation which appears to us to be the correct and proper one to be held by institutions for the relief of particular classes of disease, and for the practical teaching of them, towards the great general schools in which medicine is taught. They should, indeed, be only departments of general hospitals, in which particular portions of the work of such hospitals may be carried on. This is the arrangement found to be existing in some parts of the Continent; Vienna for example, where the large general hospital embraces departments for the treatment of various classes of disease, and the study of the several branches into which medicine is subdivided. A similar state of things prevails at the present time in England, for at most, if not all, of our large medical schools diseases of every description are treated, and a knowledge of them is efficiently taught by competent teachers. In spite of this, however, special hospitals, having in some instances professedly the most absurd and ridiculous objects, are started, their real aim being covert advertising. The multiplication of special hospitals has had a baneful influence, not only on the progress of medical science, but doubtless also on the efficient treatment of the disorders for the relief of which they are supposed to have been specially instituted.

In the June number of *Fraser's Magazine* is an article entitled "The Case of Special Hospitals." This article is, in some respects, fair and just. It deals with—besides other matters—certain charges which have been brought against special hospitals, and attempts to controvert them but in this the writer appears to us to have completely failed. The first charge dealt with is that "all the good work they [special hospitals] do is done in private, and is not available for the advancement of knowledge by the instruction of the student." This charge is practically admitted to be true, although the writer lays the cause at the door of the representatives of the general hospitals. Whether the reasons given by the author for this view of the question be true or not, the objection remains in full force.

Another charge brought against these hospitals is that "the sum contributed to their support is lost to the general hospitals, and that the financial embarrassments of the latter are thus aggravated." The writer states that during the years 1877 to 1881 the contributions to the general hospitals amounted to £1,169,000, and those to special hospitals £919,000. The contributions to special hospitals thus appear to be about four-fifths of those to the general hospitals. Is not the charge well founded?

But there is still another charge to be made against special hospitals, and especially against those of them officered by so-called specialists, and that is, that the tendency of such institutions is to lead to a narrow specialism in practice, to lead those connected with them to look at disease not from a scientific but from the narrowest and most limited point of view. The author of the paper referred to truly says that the best special hospitals are officered by physicians and surgeons who are on the staff of general hospitals. We may add that all the good work done in special hospitals has been done by such men, and not by those who have devoted themselves exclusively to the study of the narrow specialty cultivated in such institutions. We have said that such hospitals exercise a baneful influence—injurious to the profession and the public—and we cannot help thinking that association with the narrowness which is their characteristic cannot but be detrimental to anyone desirous of practising scientific medicine. It is well known that, at the present time, there is a struggle going on between the practitioners of some narrow specialisms and the practitioners of rational medicine, and the development of special hospitals can only tend to encourage the former, and delay the progress of the healing art.

THE learned Director of the Histological Institute of Stockholm, Professor RETZIUS, has just published a work under the title of "Biologische Untersuchungen," which contains the results of the labours of the students in his laboratory, and of his own researches during the last ten years. He leads off with a paper on the Structure of Striated Muscular Tissue, and states that he has devoted his attention to the muscular tissue of insects chiefly on account of the large size of the elements of the tissue in these animals; and as the Hydrophilus was not accessible to him, he selected the Dytiscus marginalis. He investigated the muscles of the legs and the long muscles of the thorax and abdomen. They were examined partly in the fresh state, immersed in the blood-serum of the insect itself; and partly after treatment with various reagents—as

chromic acid, potash bichromate, picric acid, picrocarmine, osmic acetic, and formic acids, and gold and silver chloride. He found osmic acid and potassium chromate in solutions containing one per cent., with subsequent colouration with fuchsin and treatment with potassium acetate, very serviceable in preserving the colour of the fibres; but gold chloride solutions proved the best, either with or without previous immersion in formic acid. In specimens so prepared, there are first to be seen transverse transparent light-red or violet broad bands alternating with yellowish narrow striæ, in which an indistinct granular appearance is sometimes visible. The broad bands correspond to the well-known anisotropous discs, and are sometimes subdivided by an indistinctly granular stria, which corresponds nearly to the intermediate discs of HENSEN. The sarcolemma around the fibre, and two, or in large fibres even three, longitudinal rows of nuclei, present the characters usually ascribed to them. In specimens deeply stained with gold chloride, Professor RETZIUS has noticed several novel points of structure. In the first place, he describes the muscle fibre, when seen on its lateral aspect, as presenting a number of sharply defined purplish granules embedded in transparent fundamental tissue, nearly equal in point of size, and situated at about equal distances from each other, both laterally and in the direction of the length of the muscle, though the distance between them is somewhat greater in the last-named direction. These granules divide the muscle into small rectangular areas, which are arranged parallel to its long axis. The granules are most distinct near the centre of the fibre, and every second transverse row of granules is rather more distinctly marked than that which intervenes. In fortunate specimens, it may be seen that the granules are prolonged transversely in the form of a filament through the fibre. In transverse sections, it may be observed that the fibre is seldom cylindrical, but polygonal; and near the middle is a stellate figure, in the centre of which is a nucleus surrounded by a little mass of granular protoplasm. Fine fibres radiate in all directions from the stella, and run parallel to one another, with gentle undulation and occasional dichotomous branching and junction, to the periphery. The spot where they branch or join is marked by a small nodal point. The interspaces of the fibres are filled with a transparent, colourless or slightly reddish, structureless substance. Professor RETZIUS is of opinion that the fine lines which are thus seen over the whole area of the transverse section of a muscular fibre are processes of the central cell, and remarks that no one will think this improbable who has examined the connective tissue cells of the tail of a tadpole. By long maceration the homogeneous intermediate substance may be removed and the fibrous network obtained in a separate condition, and such isolated fibres may sometimes be seen in torn sections. These, in the drawings accompanying the text, resemble the dentinal tubes radiating from the pulp cavity, or, better, the old drawings of the fibres of the lens as they radiate from the central stella of that body. According to this view, then, there is a homogeneous basal substance which is traversed at regular distances by layers of fine filaments given off from a mass of protoplasmic substance situated near the centre of the muscular fibre, and extending horizontally to the sarcolemma; and these are arranged in two series alternating with each other, one of which is thicker or coarser than the other. The successive plates of filaments break up the intermediate substance into rectangular particles. Professor RETZIUS thinks that SCHAEFER'S muscle-rods are optical sections of his transverse fibrous network. The advance of histological research, it may be remarked, does not appear to bring us any nearer to an intelligible physiological explanation of the contractile form of muscle.

THE difficulty of deciding the exact mortality occurring in childbed has been acknowledged by the best and most learned obstetricians who have paid attention to the subject. This difficulty arises from the fact that data upon which reliance can be placed are not forthcoming. Were it possible to obtain accurate returns of the deaths which happen in childbed throughout the country we might hope to obtain an approximation to the truth upon this intricate subject. It is well known, however, that such returns are not obtainable, not only for the whole country, but even for any one of our moderate-sized towns. The general returns of death made to the Registrar are necessarily inaccurate and incomplete—how inaccurate and incomplete we will not attempt to state. This defectiveness of the returns arises, in part, from the imperfect state of medical science (for differences of opinion as to the cause of death may legitimately arise in many cases) and from other causes. The returns of deaths in childbed, however, are liable to be still more inaccurate than the returns of deaths generally, and the inaccuracies are always such as to show a mortality lower than the real one. These particular returns are open to all the sources of error met with in the general returns, and to others also. A certain opprobrium attaches, or is supposed to attach, to deaths in childbed, and it is by no means uncommon to find the puerperal condition omitted in the returns. We will give one illustration of such inaccuracy. Dr. BARNES says, "It is stated in the Registrar-General's Report for 1856, that the mortality in childbed in England and Wales in 1847 was 1 in 167, and that it had fallen to 1 in 227 in 1855. Now, having applied to Dr. ELKINGTON for the puerperal statistics of Birmingham, I learn that the registrar of that town says, that no one ever specifies the deaths in childbed or from puerperal fever!" Under such circumstances the reports of the Registrar-General are of no value whatever in determining the mortality in childbed. What, then, is the value of the reports of the out-door departments of our charities? The sources of error here are probably greater even than those above noticed. Many of these sources of error cannot be eliminated. They are consequently due to no fault of the officers of maternity charities. Women confined at their own homes under the auspices of these charities are generally attended by midwives or students; attendance ceases on the ninth or tenth day after delivery. Should the women require further aid after the tenth day they naturally call in another attendant, and are lost sight of by the officers of the charity, though all the cases appear as recoveries in the annual report. Again, it is of frequent occurrence among the class of people who form the out-patients of our maternity charities, that another doctor is sought as soon as pain or any unfavourable symptom sets in. This leads to the non-attendance of the officers of the lying-in charity, and the termination of the case remains unknown to them and appears as a recovery in the annual report.

Many cases, again, when severely ill are drafted into the workhouse or into hospitals because their condition, their means, and their abodes are such that they cannot be treated with any hope of a favourable result at their own homes. All these cases, whatever may become of them, appear in the reports of the charities among the recoveries. What reliance can be placed on such reports in the investigation of the mortality in childbed? They are utterly worthless, and have been discarded by all trustworthy statisticians. Besides the above sources of information there are others to which we can turn. These are the statistics of hospitals, those of private practice, and private search of public records. We will not discuss the value of hospital statistics. The statistics of private practice would be of the highest value were they obtainable. They are, however, forthcoming only in practices among the well-to-do, and then but rarely. Statistics of private practice amongst the poor of our large towns are of no value if only by reason of the custom, so rife among this class, of frequently changing their doctor. In practice among the better class, however, the value of such statistics is very great. From data of this kind Dr. M'CLINTOCK concluded the mortality in childbed to be 1 in 123. The third source of information is the register of births and deaths. We have shown that the register of deaths alone is valueless. It must be supplemented by the register of births. The name of every woman of a childbearing age found in the register of deaths, to whatever cause her death be ascribed, should be sought for in the register of births, and if it be found that her death occurred during the period of lying-in, the death should be regarded as a death in childbed.

On the other hand, the register of births should be examined, and the result to the mother traced in every instance; and it will be found in some cases that the names of persons dying during the puerperal period will appear, not in the death register of the district where the birth was registered, but in another to which the woman had meanwhile removed. Owing to the enormous labour required and difficulties met with in this research, it will happen that some cases will elude detection. Moreover, cases of stillbirth and miscarriage did not appear in the register until quite recently. Among these are found some of the worst and most fatal cases of labour, such as difficult cases of forceps, craniotomy, turning, placenta prævia, &c. If, as frequently occurs, the puerperal condition be omitted in the returns, cases such as we have mentioned will elude the most vigilant search, and the mortality obtained, after all, will be smaller than the real one.

Such an elaborate investigation was conducted by Dr. MATTHEWS DUNCAN in Edinburgh and Glasgow, and he found the childbed mortality in married women alone to be 1 in 107. In New York, LUSK used the public records, but in a somewhat different way. The annual increase of births in large towns has been estimated at 30 per 1000 of the population. Not to estimate the births too low, LUSK placed them at 33 per 1000. In this manner he estimated the number of births in New York for the nine years 1867 to 1875. He took the number of deaths during the same period from the registered returns—a number shown already to be too small; and although he calculated the number of births liberally, he found that the mortality in childbed outside hospitals in New York was 1 in 94. These figures are probably not perfectly accurate, but they are not far wrong, and they are the best we have; the error in them consists in showing a smaller mortality than actually occurs. In the face of laborious and painstaking researches, such as DUNCAN'S and LUSK'S, it is folly to introduce the annual reports of our outdoor maternities into the discussion of the subject, except it be to point out their utter worthlessness.

Annotations.

"Ne quid nimis."

MEDICAL ADVERTISING IN THE LAY PRESS.

AT a general meeting of the Royal College of Physicians, held on Tuesday, the 29th ult., after the minutes had been confirmed, the President, Sir William Jenner, Bart., drew the attention of the College to advertisements of medical works which had recently appeared in the lay papers. He added that, feeling it to be part of his duty to watch over the honour, even more than the interests of the College, he could not but express his strong disapproval of the practice of advertising medical works in non-medical journals, and the custom, now too prevalent, of giving certificates commendatory of preparations either medicinal or alimentary—certificates which were generally used for trade purposes, often contrary to the wish or intention of those who gave them. The opinion he had expressed was entirely in accord with that formerly entertained by the Fellows, who had passed a resolution at a general meeting in June, 1873, as follows, and which was sent to every Fellow and Member of the College: "That the practice of medical authors frequently advertising their own works in the non-medical journals, and especially with the addition of laudatory extracts from reviews, is not only derogatory to the authors themselves, but is also injurious to the higher interests of the profession." The Senior Censor then gave notice of his intention to propose the following resolution at the next meeting of the College: "That the system of extensively advertising medical works in non-medical journals, and the custom of giving laudatory certificates of medicinal and other preparations, whether for publication or not, is misleading to the public, derogatory to the dignity of the profession, and contrary to the traditions and resolutions of the Royal College of Physicians." We are pleased to see the College again taking action on the question of medical advertising. The slightest infraction of the wholesome resolution passed in June, 1873, ought never to have been tolerated. But it is notorious that certain Fellows, in spite of that injunction, have continued the practice apparently without let or hindrance, for some of them have held official positions in the College during that period. It will also be remembered that, in commenting on the new edition of the By-laws and Regulations of the College, we drew attention to the fact that no mention was made of this important resolution. It is not surprising that, when such laxity prevailed, it should be imagined that the resolution had been rescinded or had become obsolete. At the next meeting of the College, the gentlemen whose names were attached to the extraordinary advertisement which appeared in one of the daily papers will have an opportunity of declaring how their names came to be used on the occasion, and we hope some explanation will be forthcoming.

ROYALTY AND HOSPITALS.

IT is characteristic of the Royal Family of these realms to be ever ready and solicitous to help forward every good work, and there is no work of higher value or greater social importance than that done by the medical charities. Nevertheless, we should be glad to feel that the force treasured up in Royal patronage, and particularly patronage of the active and personal sort, were exercised under the advice of counsellors who correctly represented professional feeling. It is regrettable that in so excellent a service as that which hospitals render to mankind there should be room for self-seeking of the baser kind, and that what seems to be organised or achieved for the public good should ever really at heart be aimed for the personal advantage or advancement of its promoters. The Hospital Sunday Fund was expressly established to exercise some sort of censorship over the work of medical charities. We should be glad to find it adopted as a rule of Royal patronage that the favour of members of the reigning family should not be extended to institutions which are not recognised by the committee administering that fund as entitled to a share of its beneficence. We have not, at this moment, any particular institution in view while making these remarks, but attention is every now and again directed to the subject of Royal patronage for hospitals, and we venture to think the great boon of Royal favour should only be extended to hospitals and infirmaries which have been established solely for the public good.

THE CASE OF THOMAS AIKEN SMYTH.

THE conviction at the Central Criminal Court of Thomas Aiken Smyth, described as a medical student thirty-six years of age, on an indictment charging him with the manslaughter of the Rev. Matthew Campbell, a clergyman of the Church of England, is a painful event which we should gladly have passed over in silence, but which we are compelled to notice in the interest of the public, of the profession, and last, though perhaps not least, of the class of unqualified practitioners to which Smyth belonged. The facts of the case are pretty familiar, but we can only deal with them so far as they are suggested or reported in the public press. Smyth was a medical student at St. Thomas's Hospital. Previously he had taken the degree of B.A. at the Queen's University. The explanation given of his not having a diploma at the ripe age of thirty-six is that he could not stand the sight of operations in the dissecting-room. Smyth was rash enough to have a plate on the door of his house in Kennington-road—"Smyth, Surgeon." But according to Mrs. Campbell's account he carried misrepresentation much further, and said he was a Doctor of Medicine of Ireland and on the staff of St. Thomas's Hospital. Under the false impression created by such descriptions of himself, he was consulted by Mr. Campbell, who had various complaints—amongst others, cancer of the tongue. The special ailment which brought about such painful consequences to himself and Smyth was retention of urine. The defendant was sent for on the 24th of February to see Mr. Campbell, and he went and prescribed for the deceased on the following day. On the 27th Mr. Campbell was exceedingly ill. Matters became very urgent in the evening of this day, and Smyth was sent for a second time, at 8.30 P.M. He came at 11 o'clock, and promised to come again, but did not till the next day. All this time he did nothing but prescribe laudanum and hot flannels. On the 1st of March Dr. C. Pearce was called in, who saw the necessity for surgical procedures, and had the patient taken to St. Thomas's Hospital, where he died on the following day of extravasation of urine, in spite of all that was done. We will not harass the feelings of those concerned in this distressing case by exaggerating the ease with which earlier surgical procedures, probably in the simple form of a catheter, would have averted the whole catastrophe; but will confine ourselves to the one great moral of the case—that of all frauds upon the public, one of the greatest is that which sets forth an unqualified man as a surgeon, and not only that, but a medical graduate of a great University. Smyth's fate may well serve as a caution to those numerous unqualified practitioners who, under some subterfuge or other, manage to deceive the public and pass themselves off as regular medical men. There seems to be in the minds of juries and others charged with the administration of the law a growing determination to regard such misrepresentation as a grave offence, if not an aggravation of bad practice. We do not wonder at this. There is so much deception practised on the public by false and misleading plates on the doors of unqualified men, sometimes backed, we are sorry to say, by registered practitioners, that when the deception is exposed, as it is sure to be from time to time, great national indignation must result. Meantime is it too much to expect that the public themselves should use a little more diligence and intelligence in investigating the pretensions of those whom they consult than was displayed in this case?

BIZZOZERO ON THE COAGULATION OF THE BLOOD.

A FURTHER note has been published by Bizzozero on the influence of his "Blutplattchen" on the process of the coagulation of the blood. If recently drawn blood is "whipped" with a bundle of threads, these become first covered with an aggregation of "Blutplattchen," to which a few white and red corpuscles adhere, and only at a later period is the fibrin deposited around the threads and adherent primary aggregation. If the threads are withdrawn before the precipitation of fibrin occurs, are immediately washed in an indifferent solution of chloride of sodium, and are then immersed in a "proplastic" liquid (prepared according to the directions of A. Schmidt), a distinct coagulation occurs in the latter. It can easily be demonstrated experimentally that this coagulation is not the result of the presence of the threads or of the few red corpuscles which they bear. The determination of the relative share in the process taken by the leucocytes and "Blutplattchen" is a more difficult matter, since we know no method of separating the two elements and determining the share taken by each in the process. Moreover, the question cannot well be decided by the preparation and testing of liquids which contain only leucocytes, since the extreme vulnerability of the "Blutplattchen" renders it almost impossible to be sure that they may not have been present and have been destroyed, leaving behind them an active substance, able to produce coagulation. For instance, saliva which contains many leucocytes but no visible "Blutplattchen," will cause coagulation in a proplastic liquid, but this does not prove the independence of the coagulation of the "Blutplattchen," since the latter would be quickly destroyed in the saliva; and it is conceivable that the fibrino-plastic influence of the latter may be due to the presence of the products of destruction of a large number of "Blutplattchen" without the latter leaving any visible evidence of their previous existence. The only way to decide the problem seemed to be to introduce into a proplastic fluid fragments of such organs as the spleen, lymphatic glands or bone-marrow, which are not only rich in leucocytes, but contain all those varieties which are found in the circulating blood. The result was very conclusive. The enormous conglomeration of leucocytes in the spleen and lymphatic glands had almost no effect in causing coagulation, and this renders it inconceivable that the effect of the primary aggregation on the threads could have been due to the few leuco-

cytes it contained. But slight clotting often occurred when fragments of bone marrow were employed, probably in consequence of their richness in blood. In fact, under similar conditions, non-lymphatic organs, as the liver and kidney, caused a coagulation, while fragments of tendon, or of cartilage, had no such effect. The possible objection that the lymphoid organs had no effect because they contained substances which neutralised the coagulating influence of the leucocytes, or hindered in any way the deposition of other elements of the fibrin, was excluded by the observation that a proplastic liquid was immediately coagulated if a fragment of a lymphoid organ and the "Blutplattchen" on the threads were at the same time introduced into it. From these experiments the conclusion seems to be justified that the coagulation is to be ascribed to the "Blutplattchen" much more than to the white corpuscles. The "Blutplattchen" of the mammalia may correspond, in the animals which have nucleated red corpuscles, to those nucleated colourless spindle-shaped cells which have long been placed (by Recklinghausen and others) in opposition to the ordinary white corpuscles of the frog. Hayem's studies on these cells in many classes of animals seem to show that they may be regarded as hæmatoblasts, although, in Bizzozero's opinion, Hayem is mistaken in thinking that they may be transformed into red corpuscles. According to the researches of the former these nucleated "Blutplattchen" correspond to those which do not possess nuclei, in that their protoplasm is prone to the same changes, that they, and not the ordinary white corpuscles, form the most important constituent of thrombus, and, finally, that they have a powerful clot-forming influence on proplastic fluids.

HOSPITALS AND PATIENTS.

WE have no quarrel, in principle, with the views set forth in the excellent letter of Dr. George W. Potter, which we published last week, on the question of making hospital patients pay; or, to speak, perhaps, more correctly, we do not see that Dr. Potter advances any arguments for exacting payment from hospital patients whose means are scanty. That people who can pay for the accommodation and the skill supplied in hospitals ought to do so is a truism; but our contention is that the ordinary and existing hospitals are not too much to accommodate patients of humble means with grave diseases. Let any medical practitioner of experience and with a fair knowledge of practice among the decent poor, dispensary or otherwise, say whether he does not know half a dozen patients who would be greatly benefited by six weeks in a hospital, but whose cases are declined because of more urgent ones—patients, we mean, whose illness renders them pitiable and fit objects of pure charity. We maintain that the hospital accommodation of the metropolis, and probably of the country, is not yet enough to meet the needs of such persons. It is time enough when they have been accommodated to talk of letting out the beds of our great hospitals on commercial principles. We are quite ready to admit that there is a class who can afford to pay something towards hospital treatment and lodging, and who cannot afford to pay the high fees exacted in some of our pay hospitals. We say some—not all. The terms of the Fever Hospital are essentially reasonable, though, alas! they do not seem profitable. The terms of other pay hospitals in London are essentially hotel terms, and are simply impracticable to all but the wealthy. The really interesting question is the extent to which our hospital beds are occupied by patients who are not "necessitous poor?" Dr. Potter says this misuse of beds has been repeatedly demonstrated. There has been a great deal said on this subject. One speaker repeats and enlarges the statement of another, but there has been very little demonstration. When it is said that a quarter of all the population of London—latterly it has advanced to a third—uses the hospitals, we are more impressed with the vagueness than with the force of the assertion, which takes no account of the fact that one patient counts by repeated letters as several "cases" in the same hospital, and then goes to another hospital to repeat the same search for a cure and the same contribution to fallacious and inflated statistics. This is not the kind of proof that Dr. Potter would be satisfied with in any scientific question. By all means let us abolish every abuse of hospitals, let us have institutions where those who can pay must pay, but let us have in perpetuity hospitals where the poor, with grave disease, can have good living, rest, and the best skill, "without money and without price," reserving their pay for the ordinary medical necessities of life.

THE SOURCE OF BOTHRIOCEPHALUS LATUS

MANY investigators have occupied themselves with the problem of the source of bothriocephalus latus. Knoch, twenty years ago, believed that he had solved it, and that the ovum or embryo taken into the intestinal canal of a dog developed there into a perfect tapeworm, without passing through an intermediate stage in any other habitat. But this conclusion was not confirmed by others, and, in the opinion of Leuckart, Kuchenmeister, and others, is certainly erroneous. Other statements on the subject amount merely to more or less probable suspicions founded on what has been ascertained of the origin of other tapeworms. Our knowledge of the subject has, however, been materially advanced by an investigation by Dr. Braun of Dorpat, a locality where the worm is comparatively frequent. He has published an account of his researches in a recent number of Virchow's *Archiv*. He started with the assumption, justified by all known facts regarding the history of other tapeworms, that, like them, the bothriocephalus must have an intermediate stage, and therefore presumably a change of host. Recorded facts show that all animals, in the intestines of which bothriocephalus has been found are fish eaters, either entirely or partially, and, further, that an organism has been detected in fishes which has been regarded as the early form of bothriocephalus. An investigation of various fish brought to the market at Dorpat showed that some had, encapsuled in the intestine, the early asexual forms of bothriocephalus. This, however, was not sufficient, since the intestines of fishes are not eaten by man, and the presence of the organisms in them would not account for the occasional endemic prevalence of the disease. Braun therefore examined the parts of the fish which are eaten, especially the muscles, the sexual glands, and the liver, and he found in the pike (*Esox lucius*) numerous young bothriocephali not only in the above parts, but also in the spleen and other viscera. They were found in almost every pike brought to the market. Hence, an infection of man can readily occur, and in that district the pike is common and is extensively eaten by the lower classes. The scolices were also found abundantly in the eel, which is also a favourite article of food. It remained to be proved, however, that the muscle scolex of the pike or eel was capable of giving rise to the adult form. A number of experiments were therefore undertaken with the cat and dog, which were fed with the infected muscle. In no case were either ova or segments of bothriocephalus found in the fæces before the special diet was commenced, only the ordinary tæniæ of these animals. When, however, the organisms from the pike were added to a strict diet, including, as the only drink, distilled water, segments of bothriocephalus were found in the fæces, and in one case, in the cat, the sexually ripe form of bothriocephalus was obtained, corresponding perfectly with that of man. The practical consequences of this conclusion are sufficiently obvious.

DOSING INFANTS WITH DRUGS.

THERE is far too much of "physicking" practised, with good or evil intentions, at the cost of the young. Many mothers and nurses, especially the inexperienced, seem never to feel satisfied as to the health and well-doing of their little ones unless they have them "under treatment." They are perpetually "purging" or "cooling," or "soothing" or "strengthening" the helpless victims of their solicitude. This is the more to be deprecated because the great majority of the so-called ailments with which very young children are troubled are the direct effects either of bad feeding or of ill management of some sort, or are in themselves efforts of nature to get rid of the stomach-hardening or irritating messes with which children are fed or physicked. The practice of administering sedatives to infants is particularly reprehensible, and ought to be strongly denounced by the profession. There is no sedative which can be used with safety in the case of infants, except by medical men versed in the action of drugs and familiar with the indicative phenomena of health and disease. The use of cordials and drams is simply a reckless play with poisons. If mothers and nurses who mean well to those under their care could only know one-half of the pain they inflict and the mischief they do, under the guise of solicitous domestic doctoring, they would not readily forgive themselves. No inconsiderable proportion of the maladies of very young children are made, and therefore needless. They are faults of a fussy endeavour to treat diseases which have no existence, and to preserve health, which is only jeopardised by the measures taken to render it doubly assured.

ROYAL COLLEGE OF SURGEONS OF IRELAND.

AS mentioned in last week's issue, a meeting of the Fellows, convened in consequence of a requisition presented to the President, was held on Thursday, May 25th, to consider and discuss certain proceedings being taken by the Council of the College, which it was considered would seriously affect its finances. A large number, some eighty, of the Fellows attended, and considerable interest was shown in the subject at issue—viz., the proposed expenditure of several thousand pounds for certain alterations in the buildings and fittings of the Medical School of the College. Mr. Carte proposed the following resolution:—"The Fellows of this College, having learned that certain recommendations of a commission appointed by the Council have been adopted, are of opinion that the present financial condition of the College does not warrant the contemplated expenditure; and further, that the said commission was informally appointed and improperly constituted, and that the Council be recommended to reconsider the matter." Mr. Corley, a member of the Council, seconded the resolution, and both gentlemen were of opinion that the funds of the College were not able to bear an expenditure of £4000. The receipts of the past year were referred to, and it was shown that the expenditure amounted to £6067, leaving a balance only of £851, which, but for the fees obtained for the dental diploma, would have resulted in a deficit. Mr. Kidd, on the other hand, denied the inability of the College, for pecuniary reasons, to allocate the sum proposed, and considered they were bound to keep the School of the College thoroughly efficient, and that the expenditure was absolutely necessary. After some discussion it was resolved to adjourn the meeting, and the question will be reopened on this day (Saturday), when the annual meeting of the College takes place. In order, however, to give extra time for the full discussion of the matter at issue, instead of fixing the hour of meeting at three o'clock, it has been arranged to take place at noon, when a very exciting debate may be expected. At the Council the voting in favour of the proposed expenditure was 11 to 5, and an amendment that the money required be raised by debentures at 5 per cent., two-thirds of the interest to be paid as a first charge upon the professors' fees and the remainder out of the College funds, was rejected. The contracts, however, have not been signed, and the result may be said now to depend upon the feeling shown at the annual meeting. Some of the Fellows are of opinion that so long as the school has a connexion with the College, it should be supplied with the necessary funds, but that at the same time it would be desirable in the interests of the College that this connexion should cease, and perhaps this view of the matter will explain the following notice of motion by Dr. Robert McDonnell, an ex-president of the College, which will be considered at the meeting this week:—"That keeping in view the present financial position of this College and the expenditure hitherto made, and now proposed to be made, on its school and buildings, the Fellows recommend to the Council carefully to consider the recommendations of the School Commission; and further express this opinion, that the time has arrived when the Fellows should be called upon fully and deliberately to consider whether a school should still be maintained in connexion with the Royal College of Surgeons in Ireland." The meeting therefore will be a most important one in the history of the College, and the result is anxiously expected by the Fellows.

PILOCARPINE IN DIPHTHERIA.

WE described, a few months ago, the results obtained by a number of Continental observers on the treatment of diphtheria by the method recommended in such eulogistic terms by Guttman: the administration of pilocarpine with the view of effecting the detachment of the false membranes by the secretions produced. Those results were to some extent contradictory, although the balance of opinion was strongly against the method, as rarely useful and often fraught with no small amount of danger in many cases. This conclusion is strongly confirmed by the subsequent experience of several physicians who have used pilocarpine. The results they have obtained have been lately summarised by Dr. Picot in the *Revue Médicale de la Suisse Romande*. Demme, for instance, in nineteen cases thus treated, failed to observe in most of them any arrest of the spread of the false membranes, and in nearly half the cases tracheotomy had to be performed. In two or three cases of moderate degree of severity pilocarpine seemed to be of some service, but its use was not exempt from difficulty, especially on account of the various tolerance exhibited by children, so that doses which in some produced alarming collapse were well borne by others. Of three cases reported by Payrandeau, two were children, and both died in a state of collapse. No favourable result was obtained by Faludi of Pesth, and an extensive trial of the method by Archambault more than confirms the doubtful opinion which he previously had expressed. He treated eighteen cases by this method, and only three recovered, although eight of the cases are said to have been of a benign form. No larger proportion recovered, however, of those which were treated by other methods, but the detailed observation of his cases has led Archambault to the conclusion that the effect of pilocarpine is positively injurious. The abundant diaphoresis exposes the patient to risk of catarrh, and the abundant mucous secretion produced, in itself involves a danger to respiration. Schmid, Laschkewitz, and Charkow have met with only unfavourable results. Of ten cases treated in this way by the latter, all died. The experience of several other physicians — Saint-Denis, Lewin, Warschauer, Dentan, Maunier, and Ferrière—has been scarcely less unfavourable, although not equalling the disastrous experience of Bernier de Bournonville, who failed to save a single one of seventeen patients thus treated. A very small minority of those

who have written on the subject consider the treatment of positive utility. Most of these seem to have drawn their conclusions from mild cases, and it may be noted that one of them—Duchini—lost four out of five cases thus treated. Almost all agree that the influence of the drug is confined to the detachment of the false membranes; that it has no influence on the poison itself is shown by the fact that it is powerless to prevent relapses.

OSTEAL OR PERIOSTEAL CACHEXIA.

IN the last volume of the St. Bartholomew's Hospital Reports there is an interesting though short account by Dr. Gee of five cases of children in whom there was more or less swelling of one of the long bones, with deep cachexia, without any clear indication of inherited syphilis, unless in one case, even where it was not distinctly excluded. Some of the cases had rickety features, but the cachexia was too profound to be explained by rachitis, without enlargement of spleen, which did not exist. Of the five cases three died, one was lost sight of, and the fifth recovered. The outline of two cases may be given. H——, a baby fourteen months old, seen with Dr. Grosvenor, of Notting-hill. For two months the lower half of the right femur and of the right tibia had been enlarging and painful; the enlargement was considerable, without signs of subperiosteal suppuration; the pallor was extreme; no fever; no signs of any internal disease, except of slight pulmonary catarrh. The child died next day. The fifth case was a boy aged nine months, seen with Dr. Glover. He had been brought up by hand; had never been healthy; had bad eczema at times, leaving a few scars. There were no reasons for suspecting syphilis. There was a swelling of the left leg, at first like dropsy, but at the time of Dr. Gee's visit more defined—the lower half of the left tibia was much enlarged, probably very painful, especially at night. So was the lower end of the right radius; the ribs were much beaded; the two lower incisors were through; nothing amiss was to be felt in the abdomen. A curious feature of this case was hæmaturia, or rather hæmatinuria. In one of the fatal cases Dr. Gee describes hæmorrhage into the left eyelid, and into the gums where the teeth are being cut, and a bruise over the sternum. Case 5 got well. Iodide of potassium did no good, but the little patient began to improve with Parrish's food. The swelling has all gone, and the patient has become strong. The rachitic element in at least three cases cannot be doubted, but the profound cachexia, apart from visceral or lymphatic disease, and the enlargement of the bones, seem to Dr. Gee to indicate a form of disease hitherto unrecognised.

SAVAGERY IN INFANTS.

A STRANGE and painful case of murder, as a matter of fact, though not in a criminal sense, has occurred at Leicester. A child, two years and nine months old, ferociously killed another child, one year and ten months old, using a piece of tin as a weapon. Of course the little savage did not consciously murder, but he wilfully and brutally attacked and ill-used, his victim. The strange child was present at the inquest, and seized the coroner's papers and threw them on the ground. The medical psychologists will probably class this case as one of homicidal mania, and they will not be wrong except in that the condition which produces this sort of savagery is one of abnormal brain development rather than disease. The abnormality consists in disproportionate development of parts of the cerebrum which should mutually control and obey each other by the law of co-ordination. It is scarcely likely that the savagery of this child at Leicester was dependent on a mood, though children of strongly emotional temperaments are often exceedingly violent in their passion. It is more probable that the little Burdett, who it seems has been notorious for his ill-treatment of children, is of that brutish type of organism which produces a character devoid of sympathy, and taking pleasure in giving pain. This—if it be as we surmise—is an instance of abnormal human development, throwing great light upon, and itself only explicable by, the Darwinian principle of progressively cumulative and constructive development. Children of this class require special culture. It would be a social blunder to let this urchin remain in the care of a mother who is avowedly unable to control him. The wolf-children of past times were only one degree lower in the scale, and not nearly as dangerous to society, looking to the sort of progeny they were likely to produce.

THE LONDON WATER-SUPPLY.

COLONEL BOLTON, R.E., the Water Examiner, reports of the state of the water in the Thames at Hampton, Molesey, and Sunbury (where are the intakes of the principal water companies obtaining their supplies from that stream) during April, "that it was good in quality from the 1st to the 23rd of April, when it became very bad, and remained in that condition for the rest of the month. The river was in a state of flood during the latter part of the month." These remarks refer to the state of the water previous to filtration. Messrs. Crookes, Odling, and Tidy report for the month of the waters delivered by the companies taking water from the Thames:—"It will be seen by the Tables that, during the month of April, the condition of the water supplied to the metropolis, in respect to clearness and to freedom from brown colour and excess of organic matter, was on the whole considerably in advance of its condition during the preceding month, despite a few exceptional cases of higher colour and slight turbidity occurring during the last week, and depending on the flooded state of the river.' Dr. Frankland reports for the month:—"The Thames water supplied by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies showed, with the exception of that sent out by the Grand Junction Company, a considerable improvement in quality upon that of last month. The filtration was also more efficient, all the waters but that of the Lambeth Company being clear and bright on delivery. The Lea water distributed by the New River and East London Companies was also chemically of much better quality than last month, the New River Company's supply being, in this respect, second to none but the best of the deep well waters. Owing to imperfect filtration, however, both waters were slightly turbid, and that of the East London Company contained moving bacteria."

"THE BRAINS OF CRIMINALS."

PROFESSOR BENEDIKT, of Vienna, made a very interesting communication in the Medico-Psychological Section of the Medical Congress last year, on the subject of a supposed peculiarity in the conformation of the brains of criminals, and exhibited a series of most carefully prepared specimens. M. Benedikt believed that certain of the sulci intercommunicated abnormally in cerebra of a criminal tendency. In the discussion which followed in the section there was the usual disposition to exaggerate what the reader of the paper had said, and to treat him as if committed to views he clearly did not entertain, much less state dogmatically, but which he submitted by way of suggestion rather than with any desire of forcing a judgment on insufficient premisses. It is not, therefore, fair to say, as is said in a paper which appears in a recent number of our transatlantic contemporary, the *Medical Record*, that Dr. William Osler, of Montreal, has adduced counter facts and statistics which involve "the *collapse*

of Benedikt's attempt to furnish an anatomical basis for crime." Nothing was further from Benedikt's purpose than to furnish any such basis. He simply pointed out what he conceived to be a peculiarity of development, or rather a defect in the development, of brains of a particular class. It does not tend to encourage research, but rather retards it, to place false constructions on what students of facts discover, and thereupon seek to brand their investigations with the discredit of collapse in what they never attempted.

THE CHAIR OF MORPHOLOGY AT CAMBRIDGE.

MR. F. M. BALFOUR, F.R.S., was on Wednesday elected, without opposition, to the newly created Professorship of Morphology at Cambridge. Indeed, as was well known, the professorship was created for Mr. Balfour in recognition by the University of his eminence as a philosophical investigator, and of his value as a teacher of Natural Science in the University. Mr. Balfour was educated at Trinity College, took his place in the first class of the Natural Sciences Tripos in 1873, was soon after elected to a Natural Science fellowship at Trinity College, and has ever since devoted himself to the study and teaching of Embryology and Morphology in the University, with occasional visits to the Zoological station at Naples, where he was able to prosecute his well-known researches in the development of Elasmobranch Fishes. These and other researches have been embodied in various papers in the *Journal of Anatomy and Physiology*, in his treatise on Elasmobranch Fishes, in his recently published work on Embryology, and in other publications. Early in life he was elected a Fellow of the Royal Society, and last year one of its medals was awarded to him. His fidelity to his University and his College, and his many friends and pupils at Cambridge, caused him to resist the tempting offers of professorships at Oxford and Edinburgh; and it is hoped that he may long remain in the place of his choice, to add to his own reputation, and to strengthen the growing school of Biology in the University.

THE VENTILATION OF SEWERS.

MR. ROBERT RAWLINSON of the Local Government Board writes to tell us that both the Editor of THE LANCET and the writer of our recent article on the ventilation of sewers "are profoundly ignorant of the questions treated." Having delivered himself of this politely expressed opinion, he proceeds to rehearse the well-known series of rules and conditions of sanitary sewerage, after the approved official pattern, and of the class which is just now helping to poison the dwellers in not a few fashionable neighbourhoods. Mr. Robert Rawlinson may be assured that we are perfectly familiar with the jargon about disconnected waste-pipes and overflow-pipes, and disconnected drains, and complete systems of drains "absolutely severed from the sewers, so that no sewer nor drain-air can ever enter house, hospital, or public building." We not only know all this, but our knowledge extends to the fact that it is in connexion with this "absolutely severed" system of drainage and sewerage that air- and blood-poisoning commonly occur. Neither Mr. Robert Rawlinson, nor those who place unbounded faith in the system he represents, can be expected to agree with us. There are two distinct, and as it would seem, irreconcilable views of this question—the medical and the engineering. The public will not be safe until they come to recognise that the latter is not one which can appreciate the real dangers of blood-poisoning or provide against them. The engineers deal with stinking effluvia and chemically discoverable gases: our concern is with those subtler poisons which are beyond the ken of the mere physicist.

BRISTOL MEDICAL SCHOOL.

THE annual distribution of prizes of the Bristol Medical School was made on May 23rd, by the Rev. J. Percival, the President of Trinity College, Oxford, and the Dean, Dr. Markham Skerritt, was able to present a very encouraging report of the School. One item in it is of special interest—viz., that this year all the candidates they have sent up have passed the primary examination for the Membership of the College of Surgeons. The number of new students during the year has been twenty-seven, and the School now numbers seventy-seven students in all. These facts show that the School is doing its work well, and is meeting with deserved success. Perhaps we ought to have said that they show it is doing part of its work well; for we do not find that the Dean drew special attention to the success of the students at the final College of Surgeons examination, and, indeed, only three passed during the year. In the course of an excellent address, Dr. Percival urged upon the wealthy citizens of Bristol the claims of the School, and also expressed the hope that they would do something to commemorate the names of Drs. Pritchard, Symonds, and Budd in a permanent and substantial way. We trust this suggestion will be acted on; and, surely, no better way of doing so could be adopted than to complete at once the buildings necessary for the accommodation of the increasing classes of this promising School.

NOTIFICATION OF INFECTIOUS DISEASES.

THE Bootle Town Council, on the recommendation of their Health Committee, having memorialised the Government in favour of the Bill for the Compulsory Notification of Infectious Diseases now before Parliament, a meeting of the medical men in the district was held, Dr. Carter occupying the chair, to protest against the action of the Sanitary Authority. As the result of the meeting the following memorial was agreed to:—

"Your memorialists are of opinion that the proposal that medical practitioners shall be compelled, without any discretionary powers, to report cases of infectious disease to the Sanitary Authorities is an unwise and unwarrantable interference with the relations in which medical men stand to their private patients. They believe that the compulsory notification of diseases by them is likely in many cases to lead to such an amount of concealment of the disease as may cause it to spread owing to the absence of the usual medical treatment and precautions, and that there is evidence that extensive concealment exists in many of the towns where compulsory notification is the law. Moreover, they are convinced that there is no reliable statistical or other evidence that such compulsory notification by medical men has had any beneficial effect in such towns. They would therefore venture respectfully to ask that you would oppose any Bill in Parliament, whether general or local in its incidence, having for its object the imposition of the duty of compulsory notification of every case of infectious disease on medical men."

AN INFECTIOUS DISEASE HOSPITAL AT WELLS.

CAPTAIN HILDYARD and Dr. BLAXALL have been holding an inquiry at Wells on an application of the sanitary authority of that city to borrow a sum of £5000 for the purpose of completing sewerage works and constructing an infectious disease hospital, the want of the latter building having given rise to the scandal we had to recount a few weeks ago. A wish was expressed that the hospital should be used both as a hospital and residence; but how this inconsistency was to be effected was not explained further than by the general statement that the Council intended to use the rooms, when not required for hospital purposes, as a residence.

CONVALESCENT HOMES FOR THE POOR.

THE Earl of Shaftesbury presided at a meeting at Willis's Rooms a few days since in support of the Metropolitan Convalescent Institution at Bexhill. Lord Algernon Percy, M.P., Mr. Cubitt, M.P., Viscount Ebrington, M.P., and Canon Farrar also spoke. It is impossible to exaggerate the usefulness of, or the need for such institutions, or the happiness of those who, in taking their own refreshing holidays, can think of the poor whom they are helping to make strong in a convalescent home. £751 were raised. We commend all such institutions to those who can spare a little out of their abundance or even out of their sufficiency. Let us praise, too, the meeting as distinguished from a dinner in which so much is wasted on superfluities that might go to the charity.

IODOFORM IN DIABETES.

THE last drug introduced into the treatment of diabetes mellitus is iodoform, which Professor Moleschott, in a recent communication to the Academy of Medicine at Rome, states he has found to be very beneficial in five cases of that disease. The quantity of sugar excreted rapidly diminished in all the cases so treated. Small doses are sometimes productive of good results, but as much as forty and fifty centigrammes may be administered daily with impunity. The Professor employs cumarin—the odoriferous principle of the Tonquin bean—to overcome the unpleasant smell of iodoform. He prescribes—iodoform, 1·0; extract of lettuce, 1·0; cumarin, 0·1: to be made into twenty pills with powdered gum arabic, and to proceed from one pill twice to two pills four times in the twenty-four hours.

PAUPER INTERMENTS.

THE recent event of the burial of a coffin at Leeds, presumably containing the body of a pauper, but which it subsequently proved had been sent to the burial-ground without the body, the latter having been left undisturbed in the mortuary of the workhouse, has led to the guardians of that borough receiving a letter from the Local Government Board setting forth the principles on which the care and disposal of the pauper dead should be conducted by them, so that public scandals of this kind may be avoided, and a reverent care exercised towards the corpse. The letter is signed by the Secretary of the Central Board, Sir J. Lambert, and betrays the thoughtful care which it might be presumed such a body would manifest in such a matter.

SMALL-POX IN BOSNIA.

A SERIOUS outbreak of small-pox is reported to have occurred in Serajevo, the capital of Bosnia, and its vicinity. The disease is so virulent that in several quarters it is believed to be plague, the alarm respecting it being exaggerated by the folly of the local government endeavouring to conceal the state of things, burying the dead by night and stopping the use of the telegraph, in a vain endeavour to hide the condition of sickness from the outside world.

DIGITAL EXPLORATION OF THE BLADDER.

SIR HENRY THOMPSON'S recent proposal to examine, by means of the finger, obscure and chronic disease of the bladder, hitherto inexplicable by sounding, &c., to which we not long ago called attention, is yielding valuable results. A patient who had suffered severely from cystitis and bleeding during three years, and without ascertained cause, was sent to Sir Henry from the country about three months ago, when the bladder was explored by the finger, after dilatation of the urethra, the patient being a lady. The outline of a considerable polypoid growth from the back of the bladder was easily defined and at once removed by blunt edged forceps. The patient is making a rapid recovery. There has been no cystitis or bleeding since, in spite of exercise, walking and driving, daily.

DEATH OF DR. PEACOCK.

WE regret to have to record the death on Wednesday morning last of Dr. T. B. Peacock, one of the consulting physicians to St. Thomas's Hospital. The sad event occurred suddenly, Dr. Peacock having been apparently in his usual health till Tuesday. In the afternoon of that day he had been escorting a party of friends through the wards of the hospital, when he was seized with paralysis and became unconscious. Drs. Sheppard and Carpenter, who happened to be at hand, rendered all the assistance in their power, and the deceased physician was placed in a private room. Consciousness, however, never returned.

SEVERAL cases of lead-poisoning having come under the notice of the Gateshead-on-Tyne Board of Guardians, they have forwarded the following resolution to the Home Secretary: "As guardians of the Gateshead Union our attention has repeatedly been drawn to the great fatality attendant upon the employment of females in the whitelead works of the neighbourhood. Decrepitude, palsy, blindness, and even death, are the frequent results of lead-poisoning. We therefore venture to ask you to establish an inquiry into the method of such employment, with a view to the introduction of machinery to do the most dangerous parts of the work."

THE *Standard* says that Mr. Thomas Griffith, a surgeon of St. Helens, near Liverpool, who, it is stated, has been in the habit of taking chloral to induce sleep, accidentally took a larger dose than usual one morning this week. Three physicians were called in, but their endeavours to restore him were of no avail. The deceased gentleman had been in practice for upwards of twenty-one years.

THE New York code of medical ethics, so far at least as it sanctions consultation between regular practitioners and homœopathists, is received with very general disfavour by the medical societies of the States and Canada, which are for the most part loud in their denunciation of the "eclectic" move.

LAST week a large and influential deputation from the Royal College of Surgeons in Ireland waited on the Lord Lieutenant at Dublin Castle, for the purpose of presenting his Excellency with an address, which was read by Mr. Chaplin, the President. His Excellency replied in suitable and appreciative terms.

AN advertisement, put forth by the committee of the Bath United Hospital, for applications for two appointments as honorary physicians, has, it appears, met with no response.

UNIVERSITY COLLEGE CONVERSAZIONE.—The Professors of University College held their second annual soirée on Wednesday evening, to which nearly 3000 guests were invited, including the Earl of Kimberley. From nine o'clock in the evening till a late hour the galleries of the building were thronged with an interested crowd of students and their friends, as well as old pupils and other upholders of the institution. The Flaxman Gallery, Engineering Laboratory, and Fine Art School were thrown open for inspection, and various scientific experiments besides contributed to the full enjoyment of the evening.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

King's Norton Union (*Rural*).—Mr. Francis Hollinshead reports for this district, for 1881, a birth-rate of 32·58, and a death-rate of 13·51 per 1000 of the population respectively. "The death-rate is the lowest death-rate I have had to record." Commenting on the large mortality among infants which happens in the district (74 deaths among children under one year occurring last year out of a total of 304 of all ages), Mr. Hollinshead remarks: "I have, in my former reports, pointed out the chief causes which go to make up this large mortality, and I have no reason to alter my opinion then expressed—viz., that a great many of them arise from preventable diseases, and depend on imperfect feeding, and above all from artificial feeding, instead of the child being nursed as nature intended it, by the mother. The only hope of lessening these deaths is by educating parents on the management of children, and more especially among the poor, endeavouring by district visiting on the part of benevolent ladies to elevate the moral tone of their lives, and on the part of sanitary bodies bringing about a better sanitation of the dwellings." Writing of the fatal diphtheria that occurred in the district during the year, Mr. Hollinshead observes:—"The cause of the disease was in my opinion attributable to the imperfectly ventilated privies at the schools." The sanitary state of the King's Norton district would appear to be steadily improving, especially by the extension of sewerage and the connexion of houses with the sewers. The privy and ashpit—the midden-privy—is common in the district, and "these receptacles are for the most part faulty in construction, and placed too near the dwellings. The ashpits especially are too large and deep, and are creators of nuisances, and calculated to be productive of disease by their sloppy state. An ashpit and privy to be safe should be placed as far from the houses as possible, and should stand by themselves, so that the air can get all round them; they should be small, watertight, and raised on a level with the ground in order to keep them dry." In fact, should be constructed on the pattern of the privies recommended in the "model by-laws" regulating new buildings issued by the Local Government Board. In addition to privies of essentially erroneous construction, it would appear that the sanitary authority pursues a faulty method of removing the filth of the district. This is done by private contract, and, according to the medical officer of health, badly done. He recommends the authority to do the work by its own agents.

Totnes (*Urban*).—Mr. Richard Jelly reports for the urban district in 1881 a death-rate of 17·04 per 1000 living, and for the union a death-rate of 24·70. The year was characterised by a remarkable absence of disease. Not that the sanitary authority have apparently done much to promote a healthier condition of the locality, for Mr. Jelly states that the drainage of Totnes proper remains *in statu quo*: the outfall continues as it was a year ago, no new works have been taken in hand during the year, and many private drains are unconnected with the main sewer. The drainage works, however, so far as they have been completed, are reported to have "answered better than was expected," but this answering includes the bursting of the high-street sewer in heavy rain, and imperfect action of the main sewer in Wanland. Obviously the sanitary authority do not anticipate much from their sewers. Newly adopted by-laws, moreover, somewhat perturb them. They find apparently that the by-laws will not act of themselves.

Fylde (*Rural*).—Mr. Davidson Walker reports for 1881 a birth-rate of 30·4, and a death-rate of 17·7 per 1000 of the population. Scarlet fever was the only one of the principal zymotic diseases prevalent in the district during the year, and in the presence of this disease Mr. Walker is at once confronted with the want of hospital accommodation. "In cottages possessing only one or two bedrooms," he writes, "isolation is a thing utterly impossible; hence the necessity of some provision in the shape of hospital accommodation for these cases. This matter I therefore earnestly commend as worthy of serious consideration. A good cottage or two in various parts of this district would well answer this purpose." With respect to the closing of schools in regard to the spread of infectious diseases he observes, "My experience leads me to believe that the closing of schools has often a tendency opposite to that for which it is intended, by allowing the children to mix more freely with the children of families who have the disease; whereas, if kept to school, they have not the same opportunity of doing so, as my invariable rule is to order all children of infected families not to attend school where complete isolation cannot be enforced." Mr. Walker would have infectious diseases notified in his district, and recommends his authority to follow the Preston plan—that is, not to seek for compulsory notification, but to offer medical practitioners a fee of two shillings and sixpence for each case notified upon forms to be supplied by the sanitary authority. The chief deficiency of the district seems to be in the supply of potable water.

Stratford (*Urban*).—Mr. G. W. Pettinger reports for 1881 a death-rate of 13·2 per 1000 living, and a birth-rate of 30 in the same proportion of population. The sanitary authority makes good use of the Monsall Fever Hospital, Manchester, for isolation of its cases of infectious diseases; but Mr. Pettinger observes, "There is great difficulty in finding out cases of infectious disease. I should strongly advise the Board to obtain the necessary powers to make it compulsory on medical men or the occupiers to report all such cases to the medical officers of health at a fee of two shillings and sixpence per case." The ashpits and privies appear to give more or less trouble in the place.

Bedford (*Rural*).—Dr. Prior reports for 1881 a death-rate of 14·45 per 1000 living. He records an extension of diphtheria in his district, apparently from the town of Bedford, which deserves to be noted with regard to the prevalence of the disease in this district.

Sunderland (*Port*).—Mr. Alfred H. Harris reports for Sunderland Port for 1881 the inspection of 1955 vessels, of which 1172 were in good sanitary, 478 in medium, and 305 in insanitary condition. The proportion of vessels in an insanitary state, which had been 60 per cent. in 1876, the vessels in a healthy state being then 40 per cent., had fallen to 15 per cent. in 1881, while those in a satisfactory state had increased to 85 per cent. In 239 of the cases noted as insanitary in 1881 the cabins, forecastles, and peaks were found unsatisfactory, and in 66 the closets and conveniences were filthy. "The sanitary inspector desires me to call special attention to the fact that the instructions of the Board of Trade, as to the stowage of ropes and ships' gear, still continues to be systematically disregarded, and that much discomfort is experienced by the crew in consequence of these stores being placed in the forecastle. From my own experience at sea on board a steam-vessel I can bear witness to the great unpleasantness that was caused to a crew through these materials being placed in a bulkhead near the forecastle, so that ultimately I had them removed. How intolerable, then, must they be when they are actually placed in the forecastle! Besides, the very forecastles are, as a rule, barely sufficient to allow a fair amount of breathing space to the crew, and they can therefore ill afford to have their space curtailed by placing ships' stores in them."

Dublin.—During the four weeks ending April 29th, the deaths within the city were 648, being in the annual ratio of 33 per 1000 persons. As compared with the three preceding months, there was a considerable decline in the mortality caused by measles, while the deaths caused by other zymotic diseases were comparatively few. Dr. Cameron hopes now the public abattoir is open that it will be used in preference to private slaughter-houses, the condition of many of the latter being very defective from a sanitary point of view. It would indeed be a most desirable improvement were all the private slaughter-houses discontinued, save a few exceptionally well-regulated ones.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns, 5575 births and 3488 deaths were registered during the week ending the 27th ult. The annual death-rate in these towns, which in the six preceding weeks had declined from 24·3 to 20·9 per 1000, rose again last week to 21·5. The lowest rates in these towns last week were 16·8 in Plymouth, 17·4 in Cardiff, and 17·5 both in Derby and Huddersfield. The rates in the other towns ranged upwards to 27·3 in Man-

chester, 27·9 both in Bradford and Bolton, and 41·1 in Preston. The deaths referred to the principal zymotic diseases in the twenty-eight towns were 569 last week, and exceeded the number in the previous week by 54; 220 resulted from whooping-cough, 146 from measles, 57 from scarlet fever, 54 from diarrhœa, 55 from "fever" (principally enteric), 19 from diphtheria, and 18 from small-pox. The lowest death-rates from these diseases last week occurred in Norwich and Huddersfield, and the highest in Preston and Portsmouth. Whooping-cough was proportionally most fatal in Birkenhead, Bolton, and Bristol; measles, in Wolverhampton, Bradford, Portsmouth, Bolton, and Preston; "fever" in Birkenhead and Hull; and scarlet fever in Brighton. The 19 deaths from diphtheria in the twenty-eight towns included 13 in London and 2 in Portsmouth. Small-pox caused 12 more deaths in London and its suburban districts; also 2 in Nottingham, 2 in Leeds, and one each in Bolton, Oldham, Salford, and Hull. The number of small-pox patients in the metropolitan asylum hospitals has steadily declined in the past five weeks from 350 to 256 on Saturday last; only 31 new cases of small-pox were admitted to these hospitals during the week, against 52 and 45 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had steadily declined in the six preceding weeks from 392 to 238, were 242 during last week, and were 38 below the corrected weekly average. The causes of 100, or 2·9 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Wolverhampton, Derby, Birkenhead, and Cardiff; while the proportions of uncertified deaths were largest in Bristol, Salford, Oldham, Bradford, Sheffield, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight large Scotch towns, which had been equal to 22·1 and 22·2 per 1000 in the two preceding weeks, further slightly rose to 22·6 in the week ending the 27th ult.; this rate exceeded by 1·1 the mean rate last week in the twenty-eight English towns. The deaths referred to the principal zymotic diseases in these towns, which had been 101 and 87 in the two previous weeks, further declined to 77 last week; they included 24 from whooping-cough, 13 from measles, 12 from diphtheria, 12 from diarrhœa, 9 from "fever," 7 from scarlet fever, and not one from small-pox. The annual death-rate from these zymotic diseases averaged 3·3 per 1000 in the eight towns, and was 0·2 below the mean rate from the same diseases in the large English towns. The fatal cases of whooping-cough, which had been 26 and 29 in the two preceding weeks, declined to 24 last week, of which 13 occurred in Glasgow, 6 in Edinburgh, and 3 in Aberdeen. The 13 deaths from measles showed a decline of 8 from the number in the previous week, and included 6 in Glasgow and 2 both in Edinburgh and Aberdeen. The 12 deaths referred to diphtheria showed a slight increase upon recent weekly numbers; 4 occurred in Glasgow, 3 in Edinburgh, and 2 both in Dundee and Paisley. Of the 12 deaths attributed to diarrhœa, which were 6 below the number in the corresponding week of last year, 8 were returned in Glasgow. The 9 deaths referred to "fever" exceeded the numbers returned in the two previous weeks, and included 3 in Glasgow and 2 both in Edinburgh and Leith. The 7 fatal cases of scarlet fever were also more numerous. The deaths referred to acute diseases of the lungs in the eight towns, which had been 113 and 120 in the two preceding weeks, were 118 last week, and exceeded by 29 the deaths attributed to these diseases in the corresponding week of last year.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 35·4 and 25·0 per 1000 in the two preceding weeks, further declined last week to 24·7, and was lower than in any previous week of this year. During the first eight weeks of the current quarter the death-rate in the city averaged, however, 29·4 per 1000, against 20·6 in London and 21·0 in Edinburgh. The 165 deaths in Dublin last week showed a further decline of 2 from recent weekly numbers; they included 6 which were referred to "fever," 4 to measles, 2 to diarrhœa, and not one either to small-pox, scarlet fever, diphtheria, or whooping-cough. Thus only 12 deaths resulted from these principal zymotic diseases, against numbers steadily declining from 29 to 19 in the five preceding weeks; these 12 deaths were equal to an annual rate of 1·8 per 1000, against 3·4 in London and 3·6 in Edinburgh. The 4 fatal cases of measles showed a further decline of 5 from the numbers returned in recent weeks; since the beginning of this year no fewer than 536 deaths from this disease have been recorded within the city. The 7 deaths referred to "fever" showed a further increase upon recent weekly numbers, and were equal to a rate considerably exceeding that which prevailed either in the English or Scotch large towns for which weekly returns are published. The causes of 10, or 6·1 per cent., of the deaths in the week were uncertified.

THE SERVICES.

ARMY MEDICAL DEPARTMENT DINNER.

THE annual dinner of the officers of the Army Medical Department took place on Saturday last at the Inns of Court Hotel, the Director-General in the chair. There were present Sir Galbraith Logan, K.C.B.; Sir Wm. M. Muir, K.C.B.; Surgeon-Generals T. Longmore, C.B., W. Maclean, C.B., R. Lawson, H. Ker Innes, C.B., T. Fraser, H. Massy, C.B., C. A. Gordon, C.B., H. Kendall, A. Shelton, J. Holloway, C.B., R. Bowen; Deputy Surg.-Generals J. A. Bostock, C.B., G. Anderson, P. S. Laing, J. O'Nial, C.B., J. Fox, J. Hanbury, C.B., J. P. Cunningham, J. Crerar, W. J. Fyffe; Brigade-Surgeons O. Barnett, C.I.E., L. Kidd, C. G. Irwin, A. G. Elkington, Grenadier Guards, S. B. Roe, C.B., A. Young, J. A. Illingworth, R. H. Jackson, C.B., J. Adcock, J. Watts, W. H. Muschamp, E. G. Macdowell, E. Becher, E. D. Tomlinson, T. Oughton, J. Johnston, E. O'Leary; Surgeon-Majors R. W. Clifton, W. Ffolliott, W. G. Don, A. J. Fergusson, J. J. Jeffcoat, J. E. Clarke, W. Riordan, B. J. Jazdowski, G. C. Gribbon, A. Allan, S. R. Ray, T. Wood, J. Landale, A. Clarke, G. Evatt, C. M. Cuffe, C.B.; W. Johnston, T. Faris, E. Roe, W. Elgee, T. W. Wright, G. Nash, W. Norris, C. Giraud, T. M. Symons, M. Cogan, T. Babington, T. F. O'Dwyer, C. H. Godwin, C. Mackinnon, S. Moore, A. W. Duke, R. Tobin, J. Walker, W. L. Notter, W. Jobson, T. V. Ash, C. F. Pollock, R. Anderson, G. Dobson, S. Muir, W. E. Gasteen, T. F. O'Dwyer, J. Shaw, W. P. Smith, J. W. Purefoy, J. Candy, A. Preston, W. Martin, J. M. Waters; Surgeons A. Grier, R. Cross, J. Falvey, J. Forrester, R. Drury, J. Beamish, G. Langridge, H. Saunders, T. E. Noding, S. Carter, W. Donnovan, C. P. Turner. Dr. Reid, R.N., the Director-General of the Navy, and Sir Joseph Fayrer, K.C.S.I., were present as guests of the officers.

Brigade-Surgeon W. G. Manley, V.C., has been ordered to Woolwich on arrival from India, and will officiate as Principal Medical Officer, vice Deputy Surgeon-General John Gibbons, C.B., who is retiring from the service.

MILITIA MEDICAL DEPARTMENT.—Surgeon-Major Henry Thomas Hartnoll, 4th Battalion, the Devonshire Regiment, resigns his commission; also is permitted to retain his rank, and to wear the prescribed uniform on his retirement.

RIFLE VOLUNTEERS.—1st Westmoreland: Acting-Surgeon George William Brumwell to be Surgeon.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Deputy Inspector-General of Hospitals and Fleets John Cotton, M.D., has been placed on the retired list from the 18th ult., with permission to assume the rank and title of Inspector-General of Hospitals and Fleets.

The following appointments have been made:—Deputy-Inspector of Hospitals and Fleets Thomas Colan, to Plymouth Hospital, vice John Cotton, retired; Staff-Surgeon George Campbell, to the *Hecla*; Staff-Surgeon William Roche, to the *Vernon*, vice G. Campbell.

DEATH FROM CHLOROFORM IN DUBLIN.—A death during the administration of chloroform took place at the Rotundo Lying-in Hospital on Monday last, while a patient in the Auxiliary Hospital was about to be operated on for ovariotomy. Restoratives were applied without avail, as the woman never rallied. An inquest has been held, and a verdict returned that the deceased died from collapse while under the influence of chloroform, the medical staff being entirely exonerated from any responsibility in connexion with the occurrence.

ABSTRACT OF REPORT OF A COMMITTEE OF THE CLINICAL SOCIETY UPON HYPERPYREXIA IN ACUTE RHEUMATISM.[1]

Presented to the Society May 26th, 1882.

AFTER a few introductory remarks pointing out the necessity for limiting the present report to an analysis of cases, sixty-seven in number, collected from various sources and mostly unpublished, the report states that the cases occurred mainly in the ten years ending 1879, and that the following division was made in analysing them:—

CLASS I.—Cases of undoubted hyperpyrexia, with an elevation of temperature to 106° and above. Under this class 47 cases are included.

CLASS II.—Cases showing a marked tendency to high range of temperature—viz., 104°, continued and persistent. Under this class 17 cases are included.

CLASS III.—Cases with the symptoms well marked, characterising usually the hyperpyrexial cases, but without marked excess in temperature. Under this class 3 cases are included.

The Committee have investigated these cases—1st. By comparison with ordinary cases of acute rheumatism, in order to learn if cases which exhibit hyperpyrexia present any other clinical differences. 2nd. By a more precise analysis of cases of hyperpyrexia and their treatment; and, lastly, they bring forward the general conclusions to which this inquiry led them.

Comparison of Hyperpyrexial Cases with those of Acute Rheumatism generally.—The first point to be considered is, whether, apart from the phenomenon of hyperpyrexia or of symptoms directly related to it, these cases exhibited any notable features of difference from the generality of cases of rheumatic fever; whether, that is, they differed in any way as to their etiology, cause, complication, or issue from the latter. A statistical comparison has therefore been made by utilising the returns of 1300 cases of acute and subacute rheumatism contained in the registrars' reports of the Middlesex Hospital for the years corresponding to those in which the hyperpyrexial cases mainly occurred. This number may be considered to afford a sufficiently wide basis of comparison; it includes 22 cases of hyperpyrexia.

The comparison was made under the following heads:—(*a*) Time of Occurrence—Season of year; (*b*) Sex; (*c*) Age; (*d*) Occupation; (*e*) Existence of family tendency to rheumatism; (*f*) The number of the attack for which the patient came under treatment; (*g*) Complications; (*h*) Mortality.

Time of Occurrence.—Of 65 cases of rheumatic hyperpyrexia occurring between the years 1869 to 1880, no fewer than 53 cases, or 81·5 per cent., were in the five years 1873 to 1877. During the same period the annual number of rheumatic fever cases in the Middlesex Hospital was above the estimated average. So that apparently, excess in hyperpyrexia corresponded with excess in prevalence of rheumatism, although by no means in proportion. It is also shown that during the decade 1870–79, the greatest prevalence of rheumatism was in the autumn and winter months—of hyperpyrexia in the spring and summer.

Sex.—Whilst the proportion of males to females in the series of 1300 cases of rheumatic fever was fairly equal, in the cases of hyperpyrexia there is a marked preponderance of males—viz., 64·2 per cent. of the total number collected.

Age.—There is less departure from the general rule with regard to age, for in each series the number is largest in the third decade of life.

Occupation.—No special occupation apparently predisposes to hyperpyrexia, there being in the 67 cases no fewer than thirty-three different occupations represented, some sedentary, others active.

Family History.—There does not appear to be an exceptional hereditary tendency to rheumatism in those in whom hyperpyrexia appears.

Number of Attack.—So far as the records go, the large majority of the hyperpyrexial cases were instances of primary attack of rheumatism—viz., 67 per cent. In the general series of rheumatic fever there were 52 per cent. first attacks. It is also shown that hyperpyrexia was not present in any attack after the third.

Complications.—Nine out of the 67 cases were uncomplicated, and 6 of these were fatal. Pericarditis was far more frequent and endocarditis only a little less frequent than in rheumatic fever generally. Pleurisy and pneumonia were rather frequent complications of the hyperpyrexial cases. It is pointed out that according to the statistics of the Middlesex Hospital, the number of cases of rheumatic pericarditis has notably diminished of late years, and if this be found to be the general experience it is a most interesting fact, when the similar decrease in cases of hyperpyrexia is also borne in mind.

Mortality.—Almost one-half of the total number of hyperpyrexial cases died—viz., 33. Complications were more frequent in the cases of recovery than in the fatal cases. The death-rate of acute rheumatism exclusive of cases of hyperpyrexia was only 1·8 per cent.

The second part of the report deals with the subject of hyperpyrexia in acute rheumatism as illustrated in the series of 67 cases under consideration. No special determining influence of the hyperpyrexia is to be found in the previous history or habits of the patients. Chorea and scarlet fever were very infrequent antecedents, and alcoholic intemperance was by no means a marked feature. The next point considered is whether the attack of acute rheumatism in which the phenomenon arose showed any striking departure from the usual type in other respects, and the views currently held that the onset of this symptom is often preceded by the abrupt subsidence of articular pain, the cessation of sweating, and the appearance of nervous symptoms, were tested by an analysis of these cases.

Joint Affection.—In 22 cases, or in about one-third, the records dealt with gave no information upon the question whether the articular pains did or did not subside before the onset of the hyperpyrexia. Of the remainder—45 cases—the notes point to the persistence of pains, either continued or variable, in no fewer than 20 cases. In 25 cases the pains subsided before the onset of the hyperpyrexia, to return in 14 of the cases after this condition had passed away.

Condition of Skin.—The notes of the cases give no information as to the cutaneous condition during the continuance of hyperpyrexia in 14 out of the 67 cases. Of the remainder, sweating is noted in 40 cases, with sudamina in 22; in one case the skin is noted as "moist," and in only 12 is it distinctly stated to be "dry." These results are not therefore in accordance with the general impression that a dry unperspiring skin is an invariable concomitant of rheumatic hyperpyrexia, such a condition of skin being present in not much more than one-fourth of the cases.

Nervous Symptoms.—These are very numerous and varied, although it may not be that the present series of cases has added many to the list of those already known and described. Those that are noticed in this series include, according to their frequency the following—delirium (in all phases), insomnia, restlessness, muscular tremors, involuntary discharges, subsultus tendinum, coma (a late symptom), headache, tremor of tongue, deafness, tonic spasms (in two cases of tetaniform character), risus sardonicus, convulsions, floccitation, tinnitus aurium, giddiness, drowsiness, vomiting, silliness of manner, fearfulness, hesitating speech, chorea and hyperæsthesia. Many such symptoms—such as those indicated merely by alteration or strangeness in demeanour—may easily have escaped record, and the report deals particularly with the subject of delirium in relation to the hyperpyrexia. Three groups of cases in which delirium was noted may be established according as the delirium preceded the onset of hyperpyrexia (24 cases), accompanied it (19), or followed upon it (10 cases); and each of these groups is analysed as to the date of appearance and duration of the delirium, the intensity of the associated hyperpyrexia and the result of the case. In this abstract it may suffice to point out, that of the cases in which the delirium preceded the hyperpyrexia, 19 died and 5 recovered; of those in which both symptoms arose together, 6 died and 13 recovered; and of those where delirium appeared after the hyperpyrexia, 3 died and 7 recovered. Delirium does not appear to mark the undue severity of the disease, for out of 57 cases, there were 31 deaths and 26 recoveries; in 8 cases, in which it was absent, the highest temperature was 107°, and there were 6 recoveries to 2 deaths. Delirium and death, however, marked some cases where the temperature never reached extreme levels.

The Hyperpyrexia.—Bearing in mind the definition of the

[1] The Committee was appointed in October, 1879, to "investigate the causes, consequences, and treatment of hyperpyrexia in rheumatic fever and other acute febrile diseases.

condition and the subdivision of the cases given at the outset, the present portion of the report is simply a study of thermometry. It will be seen how varied the hyperpyrexia is, not only in its intensity and duration, but in the manner and time of its appearance, and how difficult it is to discover laws which govern its course. Thermometric curves show at a glance the capriciousness which is its characteristic feature. In some cases an abnormally high temperature existing for days or hours, almost suddenly leaps to higher levels; in others a more gradual ascent takes place; in yet others there is a far more rapid rise from a comparatively mild and moderate pyrexia. Are we, then, in a position to assert that there is such marked difference in the mode of onset of the hyperpyrexia and in its course as to enable a subdivision into types of hyperpyrexia to be established? To answer this question, it is necessary to critically examine the temperature curves of a large number of cases. A study of the temperature charts in 47 cases enables one to discriminate at least five different types of the condition as regards the mode of onset of the hyperpyrexia and the course taken by it. These subdivisions are, of necessity, somewhat arbitrary, and intermediate forms are met with, which it is difficult to classify. However, when marked examples are taken, the division appears to have some reasonable basis in fact.

Type A.—Temperature rising gradually for a few days, and then suddenly culminating in a maximum by an exacerbation of several degrees. Of this there are eleven examples.

Type B.—Temperature, after maintaining for one or more days a moderate level, suddenly rises to excessive heights. Twelve cases fall under this category, which present also transitional curves between this and the preceding type.

Type C.—The pyrexia has a more continuous course, not unlike that of typhoid fever, without violent or excessive exacerbations. Three cases fall under this class.

Type D.—Temperature rising gradually to a maximum, and then permanently reduced by the cold bath or wet pack. Three cases conform to this type.

Type E.—Cases of severe character, in which the tendency to rise to hyperpyrexial heights is very pronounced, so that to control it cold baths have to be frequently repeated. Eight cases are included.

There remain 9 cases which cannot be classed under any of these types, and no attempt is made to analyze the very irregular course of temperature exhibited by them.

The *intensity* of the hyperpyrexia observed in these cases can only be approximately estimated by reference to the maximum temperature attained, and the duration of the hyperpyrexial tendency, since the necessity of treatment by the adoption of antipyretic measures checks the rising temperature, and the thermometer does not mark the limit it might have attained. In several cases such measures were at once effectual; in many others even repeated applications had no influence in averting death. The following table shows at a glance the influence on mortality exerted by the degree of temperature attained, as well as the effect of bathing, to which further reference is made under the head of Treatment.

Morning temperature.	No. of cases.	Recovered.			Died.		
		Bathed.	Not bathed.	Total	Bathed.	Not bathed.	Total
111·1 to 112°	3	0	0	0	1	2	3
110·1 to 111°	1	0	0	0	1	0	1
109·1 to 110°	8	1	0	1	6	1	7
108·1 to 109°	7	1	0	1	5	1	6
107·1 to 108°	9	4	0	4	4	1	5
106·1 to 107°	11	8	0	8	3	0	3
105·1 to 106°	18	7	6	13	2	3	5
104·1 to 105°	8	2	4	6	0	2	2
103·1 to 104°	1	1	0	1	0	0	0
102·1 to 103°	1	0	0	0	0	1	1
Total . .	67	24	10	34	22	11	33

The occurrence of some fatal cases where the temperature was not excessive shows that death is not invariably due to the hyperpyrexia alone. The fatal cases all terminated in or before the sixth week of the rheumatic attack. No deaths took place in the first week; and 20 out of the 33 occurred in the second and third weeks. Naturally, in cases of recovery, convalescence was prolonged; so that only 5 out of the 34 recoveries were well within the first six weeks, the rest at various periods up to the twelfth.

An attempt has been made by comparison of the cases to ascertain whether any definite relation does or does not exist between the maximum temperature attained, the date of onset of, and duration of, the hyperpyrexia. And great variety was found to exist, for although in some of the severest cases the outburst of high temperature took place early in the disease, in others its appearance was much delayed. As to duration, although, as might have been expected, the cases marked by the highest degree of hyperpyrexia reached a fatal termination in a few hours, some were prolonged for days, whilst some of milder type were of brief duration. The prolongation of the hyperpyrexial period in severe cases was doubtless often due to the influence of treatment.

Post-mortem appearances are recorded in 29 out of the 33 fatal cases. In 5 of these there were no manifest visceral changes, and as to lesions of recent inflammatory kind, there were meningitis (limited) in two cases, pericarditis in 9, endocarditis in 8, pneumonia in 2, pleurisy in 4, and in several cases more than one of these lesions occurred in the same subject. So that the proportion of cases in which recent visceral inflammations were absent was very considerable.

Treatment of Hyperpyrexia. — Amongst the various methods employed for the reduction of temperature by the external application of cold, that of the bath is the one most generally employed. Forty-six of the cases were so treated, in some obviously as a last resort. Hence the mortality is high—viz., 22 to 29 recoveries, the non-bathed giving 11 deaths to 10 recoveries. However, of the latter which recovered, none exceeded a maximum of 106°, and of the former as many as 15 or five-eighths of the total were cases in which the temperature reached above that level. Again, in 6 out of the 11 fatal cases that were not bathed, the maximum was below 106°, and in only 3 out of the 22 fatal bathed cases. The average maximum temperature in these fatal cases was 107° in the non-bathed, 108·2° in the bathed. So it appears that when the hyperpyrexia is of great severity this treatment is often of no avail, but that it turns the scale in the direction of recovery when the temperature has not attained that high level; and, further, in many cases recourse is had to it too late. No doubt differences exist in various cases with respect to the most suitable time for having recourse to the treatment, and the committee emphasise the injunctions laid down by others that indications for its employment must be sought in the occurrence of the prodromal signs above mentioned together with a rising temperature. There is much to show that the treatment not only reduces temperature, but allays delirium, reduces the frequency of and gives strength to the pulse, and induces sleep. The fact, however, that a certain number of cases in which the temperature does not reach 106° succumb if not treated by baths, and that only one of the 22 fatal cases which had been so treated had a maximum temperature below 105°, points to the advisability of having recourse to the bath when the temperature reaches 105°. There seems little doubt that if this were systematically done, the mortality in rheumatic hyperpyrexia would be materially diminished. An analysis is given in the report of the 46 cases submitted to this treatment with respect to the number of baths given, the temperature of the body when given, the temperature of the bath, and the extent to which the body temperature is reduced by the bath and the time taken for it to reach the minimum. It is not possible to give these facts in an abstract, but it is sufficient to say that the results are most variable and fully bear out the conclusion that it is impossible to predicate what amount of reduction in temperature may be expected from a bath of any given temperature or duration.

CONCLUSIONS.

1. That cases of hyperpyrexia in acute rheumatism appear to prevail at certain periods, having in the last decade been remarkably numerous in the years 1873–76, whereas latterly they appear to have been much less frequent. That such excess corresponds in a certain degree, but not in actual proportion, to a similar excessive prevalence in acute rheumatism generally. That the largest number of cases of hyperpyrexia arose in the spring and summer months, whereas rheumatism is relatively more common in the autumn and winter.

2. That whilst very little difference obtains between the two sexes in regard to proclivity to rheumatism, the pro-

portion of males to females exhibiting hyperpyrexial manifestations is 1·8 to 1. But that as to age no such marked difference exists; nor as to occupation.

3. That the subjects of hyperpyrexia show no undue rheumatic tendency as regards family predisposition.

4. That cases of hyperpyrexia preponderate in first attacks of rheumatic fever.

5. That hyperpyrexia is not necessarily accompanied by any visceral complications, but may itself be fatal. The complications with which it is most frequently associated are pericarditis and pneumonia.

6. That the mortality of these cases is very considerable, hyperpyrexia being one of the chief causes of death in acute rheumatism.

7. That although present in a certain number of cases, and then of much value from their prodromal significance, neither the abrupt disappearance of articular affection, nor the similarly abrupt cessation of sweating, is an invariable antecedent of the hyperpyrexial outburst.

8. That the supervention of delirium or other symptom of nervous disturbance is very frequent either antecedent to or simultaneous with the hyperpyrexia.

9. That there is considerable variability in the date of the occurrence and in the duration of the hyperpyrexial condition, ranging, according to our observations at least, from the 4th to the 30th day.

10. That when death results it has occurred mostly in the 2nd and 3rd week of the rheumatic attack.

11. That the post-mortem examinations in a certain proportion elicited no distinct visceral lesions, and that when present the lesions are not necessarily extensive.

12. That the prompt and early application of cold to the surface is a most valuable mode of treatment of hyperpyrexia. That the chances of its efficacy are greater the earlier it is had recourse to. That the temperature cannot safely be allowed to rise above 105°. That failing the most certain measure—viz., the cold bath—cold may be applied in various other ways: by the application of ice, by cold affusions, ice-bags, wet sheets, and iced injections.

The Committee did not think it advisable in the present report to enter into theoretical considerations, and limiting the study of hyperpyrexia to the records of 67 cases of acute rheumatism, deemed it premature to enter into physiological reasonings until the same conditions had been reviewed in other acute febrile diseases. The report is signed by Drs. R. Southey, H. Weber, W. M. Ord, F. Taylor, T. Barlow, and S. Coupland.

CHARGE AGAINST A HOSPITAL SURGEON.

AT Bow-street Police-court on Friday, the 26th ult., Mr. Angel Money, surgeon at the Great Ormond-street Hospital for Sick Children, was summoned before Mr. Flowers to answer a charge of having improperly interfered with the dead body of an infant named Robert John Maddick, on March 7th, by cutting it.

Mr. Besley appeared for the Vigilance Association, who were the complainants in the case; and Mr. Horace Avory for Mr. Money.

Mr. BESLEY said that Mrs. Maddick, the mother of the child, had made an application at the police-court respecting this matter in March last. The Vigilance Association had taken up the case, and had given instructions for these proceedings to be instituted. He hoped that nothing he might say would be construed either against the hospital or Mr. Money. The sole object of the proceedings was to learn whether, in the absence of a coroner's order, there was a right on the part of any person to make anatomical examinations without having previously obtained the consent of the nearest relative. Mr. Besley referred, among other things, to sections of the Anatomy Act, 2 and 3 William IV., cap. 75, which provided against improper interference with, or indignities to, a dead human body, whether buried or not. He also pointed out that by the 7th section the consent of the nearest relative to an anatomical examination must be obtained. The case of the "Queen *v.* Feist" was cited, and Mr. Besley contended that no post-mortem examination should be made except by the coroner's order, or under the conditions of the Anatomy Act. A notion seemed to prevail among the hospital authorities that a post-mortem examination was taken as authorised unless notice to the contrary had been given previously in writing by the nearest relative. The Vigilance Association in all probability would not have thought it necessary to have the law determined in this case if that notion had not been general. They felt that these authorities were in error, and that the sooner they acted in accordance with the Act the better. Nothing could be more likely to destroy the benefits of hospitals than repetition of such cases. Mr. Besley added that the prevailing notion would act in favour of the defendant.

Mrs. HARRIETT MADDICK deposed that she was the wife of John Maddick, of 46, Wych-street. In February last their son, Robert John Maddick, two years of age, was ill, and was taken to Dr. Welch, of Blackmore-street, subsequently to the Clare Market Dispensary, and on the 7th of March to the hospital in question. She remained with the child until midday, and then left. Before leaving she told Dr. Reed that the child had had a fall. She returned at six in the evening, and after being detained for some time, owing to some alleged mistake in the name, she was informed that her child had died at twenty minutes past one. She was advised not to see the child that day, but to call the next morning at nine. She went at twelve with her sister. She was told that she could not see the body of her child, as the doctors were engaged. According to arrangement made she had the child removed that evening by an undertaker. Upon looking at it she found that the body and head had been cut open.

In cross-examination by Mr. AVORY the witness said she knew a certificate as to the cause of death had to be given. No one had suggested the dissection of the child.

The post-mortem examination-book was produced by Mr. WHITFIELD, the secretary of the hospital. It contained an entry as to the result of the examination.

Mr. AVORY thereupon addressed the magistrate, pointing out that it was the practice in hospitals to make post-mortem examinations unless a request to the contrary was received from the parents. Requests of this kind had frequently been complied with by the authorities at the hospital in question, but in this case it was necessary to make an examination before a certificate showing the cause of death could be given. If this had not been done the child could not have been buried unless an inquest had been held, and in that case Mrs. Maddick would have found that an examination would have been ordered by the coroner. It was suggested that the Anatomy Act did not apply to the case in question.

Mr. BESLEY submitted there had been a contravention of the 7th section of the Act, forty-eight hours' notice not having been given for the examination conducted by the direction of the coroner.

Mr. FLOWERS adjourned the case in order that he might consider it fully.

Correspondence.

"Audi alteram partem."

VARIOLA AND VACCINIA.

To the Editor of THE LANCET.

SIR,—Had I delayed till the sixth day in writing to you on the above subject, I would, probably, not have written at all, and my experiment, like that of my late uncle, Surgeon G. G. McPherson, H.E.I.C., would have begun and ended with the first attempt; instead of this, however, I felt some important issues were at stake, and therefore decided upon carrying on these experiments, and I have been amply rewarded for my perseverance, though it has ended in the complete overthrow of my theory regarding the artificial production of cow-pox, and left me no other refuge than the acceptance of the spontaneous origin of cow-pox. It is my intention at an early date to lay the results of my experiments before the public in detail, but I feel some explanation is due to your readers for this sudden and entire change of opinion, and I shall now endeavour to do this in such a manner as will take up the smallest amount of your valuable space, consistent with clearness of detail.

On the morning of the sixth day the eruption in all three

cases, recorded as apparently successful up to the fifth day, had undergone a remarkable change, and with this change all traces of similarity to the true vaccinal or cow-pox eruption disappeared, and it was clear that a rapidly drying-up process had set in. On puncturing the eruption, such as it was, matter in small quantities exuded, utterly unfit, in my opinion, to experiment with. This drying-up process went on so rapidly that in eight days all traces of the local irritation had ceased, and the resulting crust, or, more correctly speaking, an irregular and totally uncharacteristic scab, fell off when touched, leaving beneath the cicatrices of the thoroughly healed scratches, into which the small-pox virus (lymph) had been most freely and carefully inserted.

Nothing could be more complete than the failure of the experiment as regarded these three cows, and I was strongly tempted to give it up, and with it my theory, as I felt that no accidental inoculation by the milkers could possibly succeed if this mode of inserting the small-pox virus produced nothing but local irritation, and no trace of any constitutional disturbance. There seemed, however, one chance more—viz., the employment of small-pox crusts in a manner similar to that lately in practice among the hereditary inoculators (some of whom are now my best vaccinators) in the Himalayan portion of my circle—viz., the country near Jumnotri and Gungotri, or the sources of the Jumnah and Ganges, which mode of inoculation I had witnessed when successfully combating inoculation by vaccination in 1865. Owing to the expense, trouble, and difficulty attendant on the keep of and operation on cows, I selected calves from a year to eighteen months old, and on these, to the extent of seven, I have been operating with small-pox lymph, from tubes in two places and the same number of insertions, with a solution of powdered small-pox crusts, carefully collected, and kept in bottles to prevent the possibility of a mistake, as regards the source of the lymph employed.

All these cases failed in a manner more or less similar to the three cows first operated on. I filled tubes with small-pox virus from various cases, so that the chance of the first supply being alone inert might be removed, but, as said before, the results were all similar in their want of success. It now occurred to me to operate on the cow supposed to be insusceptible from constitutional causes to small-pox, and all these calves, with the ordinary vaccine lymph in circulation, and here the results were very different. In every case, to the extent of eight, the cow included, I got a characteristic vaccine eruption, which already has in two transmissions produced its like, and admitted of more than twenty tubes being filled with the lymph, the activity of which has been most satisfactorily proved. As far, therefore, as the experiment has gone, the following conclusions appear to have been established :—

1. That cows cannot be inoculated with small-pox by any of the means or methods at present in use for inoculating the human subject.

2. That the result of this attempt at inoculation is the production of a local irritation without any constitutional disturbance whatever.

3. That the employment of the matter which may exude from this eruption, the result of local irritation, may lead to a train of the most alarming symptoms, and possibly, if not probably, to those of small-pox itself, from the fact of the small-pox virus remaining in the midst of this irritation, unchanged, or at all events so little changed as to be sufficiently active, when inserted into the human system, to produce symptoms differing in no respect from those of small-pox.

4. That it is possible to vaccinate the cow with the vaccine lymph in ordinary use in such a manner that the resulting eruption will produce a similar disease capable of propagating itself, and nothing else.

5. That the symptoms following the inoculation and vaccination of the same animal to the extent of the eight cases operated on are perfectly characteristic as regards the possibility of passing into the system of the cow the virus of small-pox and cow-pox. In the former—i.e., inoculation—the result was purely local, and confined to the closest proximity to the points of insertion, as was exhibited by the early setting in and persistence of the local irritation, unaccompanied with any febrile or other disturbance, together with the very limited period of the local irritation and the complete healing of the part without any but an uncharacteristic scab falling off from the sixth to the eighth day. In the latter, however—i.e., vaccination—the quiescence of incubation as exhibited at and near the point of insertion was most clearly witnessed, and the febrile disturbance on the fifth and sixth days was equally clearly marked, accompanied with loss of appetite; the areola was characteristic and well-defined, and there was considerable sensitiveness of the parts round the points where the insertions were made. The eruption was at its height on the morning of the seventh day, and the lymph which exuded from the punctures made was clear and liquid, running rapidly and quickly up the capillary tubes (Husband's).

In closing this letter I would merely remark, that if my third conclusion is correct, it may account for the "modified variola" seen by the late Mr. Ceely, of Aylesbury, and the alarming train of symptoms witnessed by the late Surgeon G. G. McPherson, H.E.I.C., alluded to in my first letter and in the beginning of this, and which led the late Mr. McPherson to abandon the experiment. I have not seen Mr. Badcock's pamphlet, published in 1845, alluded to in Dr. Carpenter's contribution in "Disease Germs" in the October number of the *Nineteenth Century*, page 551, but I shall be glad to supply Mr. Badcock with a quantity of small-pox virus, and crusts, for a repetition of the experiments carried out by him in 1845; the results of which were so remarkably different from those I have now recorded.

Apologising for the length of this letter,

I remain, Sir, yours truly,

R. PRINGLE, M.D., Surgeon-Major,
Deputy Sanitary Commissioner, 1st Circle, N.W.P. and Oudh.
Camp Meerut, N.W.P., India, Feb. 6th, 1882.

"SURGICAL EMPHYSEMA."

To the Editor of THE LANCET.

SIR,—If I may rejoin to Mr. Wyatt's very fair and detailed reply, I will limit the range of my remarks to one sentence ostensibly conveying his chief criticism on my suggested experiment. It is the following: "In nature the much greater *resistance* offered by the tracheal wall, in accordance with the laws of fluids, *transmits* backward *a force*, which tends to equalise the tension throughout the respiratory tract, and in some parts of the lung to increase it considerably." The main stress of this sentence is the assertion, which in quoting I have italicised, that resistance transmits a force. Now, in modern science the word force signifies rate at which work is done, though popular writers still employ it as synonymous with energy. If Mr. Wyatt uses it strictly, his whole sentence is to me unintelligible. If, on the other hand, by a force he means a form of energy, then, for the transmission of this energy a material object is required, which resistance is not.

Mr. Wyatt no doubt bears in mind that fluids press equally in every direction—on trachea, bronchus, and cell, superficies for superficies; but his remark about the much greater resistance offered by the tracheal wall indicates that he forgets, or would deny, that pressure and resistance are always equal and opposite. This last proposition is, however, no matter of opinion or even of fact. Pressure and resistance are twin ideas, and to deny their equivalence or necessary interdependence is simply to show that under the old terms something new is being brought under discussion. So far apart, however, are our points of view, that I can only affect to guess vaguely at the meaning of a sentence which, taken literally, seems to me as absurd (and I speak with all respect) as to Mr. Wyatt my position seems false.

Before leaving the subject, permit me to adduce an illustration of the kind of evidence by which the expiratory theory is supported. According to this theory, the act of blowing a trumpet stretches the air-vesicles, though the air be reduced in quantity by escaping through the glottis, and, highly compressible as it is, must be much condensed ere it can be forced through the lips with so much friction, yet the air-vesicles expand. Dr. B. W. Richardson, who has had exceptional opportunities for the study of chest diseases of all kinds, and who in his experience must have met with many broken-winded trumpeters, says: "In professed players on wind instruments, I have several times seen emphysematous disease thus induced" ("Diseases of Modern Life," p. 413).

I remain, Sir, yours truly,

London, May 27th. WM. MCLAURIN, M.B., C.M. Glas.

ETIOLOGY OF TYPHOID FEVER IN INDIA.

To the Editor of THE LANCET.

SIR,—My attention has been directed to a letter on this subject in your issue of April 8th, the writer of which states "all are agreed that the lesion of the intestinal glands is but the local expression of a general state existing in the system, and does not take place till the fever has existed for some days; but Surgeon Martin's theory would make the glandular affection the starting point, and would hold the local lesion responsible for the specific constitutional state, whilst the best observers hold exactly the opposite opinion." That this is an unintentional misrepresentation of the theory of the etiology of enteric fever with which my name is associated will be apparent from the following passage from my "Contributions to Military and State Medicine," vol. i., pp. 216–7: "That the first step in the enteric fever process is an absorption of putrid matters, and their circulation in the venous blood. The partial and temporary elimination of this septic poison by the lungs; its subsequent presence in the arterial blood when its amount becomes too great for elimination by the lungs; then the strain on the lymphatic system to eliminate the poison, and its failure to do so (this failure being the inauguration or determiner of the specific enteric fever process); then its elimination by the glands of the intestinal tract in the form of a suppurative enteritis; and the ultimate elimination here of the septic poison in a virulent form, or as bioplasm endowed with a special modification of the vital process, and capable of communicating this specific process to healthy blood bioplasms, explain, I think, most satisfactorily—(1) the occasional (spontaneous) origination of enteric fever; (2) its occasional pythogenetic origin, as insisted on by Murchison; (3) its origination as a result of increased temperature, and hence its rarity in natives of tropical climates; (4) its occurrence chiefly during the age of functional activity of the intestinal glands; (5) its comparative rarity after the age at which these glands are known to atrophy; (6) the unmistakable symptoms of hepatic and splenic insufficiency which accompany it; (7) the true first stage of it, which is only an apparent period of incubation (see page 225); (8) the occasional observance of bacteria in enteric fever blood, this being a result of the septic transformation of nitrogenous matter (Burdon Sanderson, 'Privy Council Reports for 1874'); and (9) its occasional propagation by contagion, which is the original poison, or the patient's bioplasm in which the septic transformation is developed, and which is capable of communicating the same process to a healthy organism." The hypothesis is fully explained, and the subject discussed in all its bearings, in the work from which this passage is quoted.

I am, Sir, your obedient servant,

JOHN MARTIN,
Surgeon, Army Medical Department.

Cork, April 24th, 1882.

OVARIOTOMY.

To the Editor of THE LANCET.

SIR,—A short note in the annotation columns of THE LANCET for last week, on the report of the Samaritan Free Hospital for last year, written in a spirit of fair and legitimate criticism which stands out in marked contrast with that exhibited by some of your contemporaries, calls for a short note at my hands. Many things have to be taken into account in the question of mortality after operations which are often overlooked, and nothing so much as the nature of the cases, and had I been more thoughtful of my statistics and less influenced by a desire to give the best chance to a poor woman dying of ovarian disease, I should have been able to show better results.

The writer of the note has fallen into an error which I am sure he will thank me for correcting. After noting the difference in point of mortality between the non-Listerian and Listerian cases of ovariotomy, he says "the result is not otherwise in regard to other operations. Thus of 87 non-antiseptic operations 13 died, while of 83 only 3 died." The writer will find on looking again at the table that of "other operations there were 29 non-Listerian cases of which 5 died, and 19 Listerian of which 3 died; a very different state of things, and not much to the discredit of the non-Listerian cases if the nature of the cases be taken into account.

I would point out that it is a very unsafe proceeding to lay too much stress on any particular series of cases, and especially on those of one year only. The advocates of Listerism may point with pride to the figures you have quoted, but I would ask you to suspend your judgment until the statistics of this year are published, regarding which professional etiquette forbids that I should say more. I would ask you also to give due consideration to the statistics of Dr. Keith since he has discarded Listerism, and note those from Birmingham, where the Listerian cases show a mortality of 20 per cent., and the "absolutely" non-Listerian (Mr. Tait's) only 7 per cent.

I am, Sir, your obedient servant,

GEORGE GRANVILLE BANTOCK.

Granville-place, W., May 24th, 1882.

MR. CHARLES DARWIN'S LETTERS.

To the Editor of THE LANCET.

SIR,—Will you allow me to mention that I am collecting my father's letters with a view to a biography. I shall be much obliged to any of my father's friends and correspondents who may have letters written by him if they will kindly allow me to see and make copies of them. I need hardly add that no letter shall be published without the full consent of its owner.

Yours obediently,

Down, Beckenham, May 24th, 1882. FRANCIS DARWIN.

Obituary.

PROF. JAMES R. WOOD, M.D., OF NEW YORK.

BY the death of Professor Wood, which we deeply regret to record, the profession of America loses a surgeon of the first quality. He had great daring as an operator, but also great carefulness, and the results were interesting not so much in the way of mutilation as of reproduction. His operations for the removal of necrosed bone and the reproduction of new were singularly successful. We noticed a new lower maxillary bone so reproduced, on its passage through London, a few years ago, on its way from Berlin, where it excited greatly the admiration of Langenbeck, who said "there is not another such specimen in the whole of Europe as the one I now show you." Professor Wood was born in New York in 1816. He was educated at the Friends' Seminary, and it is worthy of distinct note that in this same seminary Dr. Valentine Mott, Dr. Parish, and other equally famous men were taught. Two things are before us which excite our interest in writing an imperfect notice of this good surgeon: one is his portrait and the other is the catalogue of the museum which he commenced in 1856, and which he handed over as a gift to the Commissioners of Charities and Correction of the city of New York a year ago. He was of short stature, but his face and head were full of force and character, and among his lighter peculiarities, always interesting in great men, was the white waistcoat he wore and a neatly arranged flower in his buttonhole. The museum is one of the best in the States, and comprises many unique specimens in anatomy and pathology. It is an illustration of what can be done by one man who utilises his opportunities. The humanity of Dr. Wood was proportionate to his professional greatness. "His ready help was always nigh," not only in a surgical way, but in ways of multiform aid to poor and disabled people. We do not know what our charity reformers would say to one portion of his record, in the *New York Herald*, that up to 1857 he had treated gratuitously 100,000 persons. Not the least service of his life was his attention to hospital hygiene and administration in Bellevue Hospital for forty years, by which the comfort of patients was greatly increased and the number of deaths diminished. It is highly gratifying to us to notice a life so full of professional and human virtues.

CAPTAIN DOUGLAS GALTON, R.E., C.B., F.R.S., has accepted the Presidentship of the Congress of the Sanitary Institute of Great Britain, to be held at Newcastle-on-Tyne.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Commons on Thursday, the 25th ult., further petitions for the exemption of medical men from the increased carriage duty were presented from Plymouth and Bletchingley. Mr. Hopwood gave notice of a question with reference to the repeated prosecution under the Vaccination Acts of a man named John Savage, of Kinsale, county Cork, who, it is alleged, has been fined twenty-six times.

Militia Surgeons.

Mr. O'Shaughnessy gave notice that he will ask the Secretary for War whether it is true that on the compulsory retirement, under 68A Circular, January, 1882, of militia surgeons holding commissions from lord lieutenants of counties, at the age of sixty-five, the pension of six shillings a day, to which, under certain circumstances, such surgeons are entitled to under 5 George IV., c. 33, has been refused them; and if he will explain under what enactment the right to this pension is alleged to have been destroyed.

On Friday, more petitions *re* the carriage duty were presented from Stoke, Maidstone, Saffron Walden, Rotherham, Lichfield, and Lincoln. A petition in favour of the Infectious Diseases Bill was presented from Birmingham.

Spurious Cheese.

Mr. R. Paget gave notice that he will ask the President of the Board of Trade if his attention has been called to the manufacture, in the United States of America, of an article called cheese, compounded of a mixture of the bluest skim-milk and lard; and, if he will endeavour to ascertain if any of this spurious cheese is imported into this country; and, if so, if he will take steps to ensure that this compound, when exposed for sale, shall be sold only as "lard cheese," or be distinguished in such a manner as to prevent imposition to purchasers in this country.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following Members were admitted Fellows of the College on May 23rd:—

Bowles, Robert Leamon, M.D. St. And., Folkestone.
Champneys, Francis Hy., M.B. Oxon., Gt. Cumberland-place.
Duncan, James Matthews, M.D. Aberd., Brook-street.
Glynn, Thomas Robinson, M.D. Lond., Liverpool.
Leech, Daniel John, M.D. Lond., Manchester.
Ross, James, M.D. Aberd., Manchester.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the First Professional Examination for the Fellowship of the College at meetings of the Board of Examiners held last week:—

Charles Gross, Walter Fowler, and Wm. L. Bright, Guy's Hospital; Stephen Paget, Fredk. W. C. Jones, and James N. Vogan, St. Bartholomew's Hospital; Sinclair White, Queen's College, Galway, and Sheffield; John Marriott, Charing-cross Hospital; Walter Blaxland, London Hospital; James Swain, Westminster Hospital.

Of the 72 candidates examined, 38 failed to satisfy the Board, and were referred for six months' further anatomical and physiological study.

For the Final Fellowship Examination there were 17 candidates, 13 of whom were successful. We shall publish the list of names after the meeting of the Council to be held next week.

[In the list published on May 20th of candidates who passed the Primary Examination, for "George Greenwood," read "George Gresswell," Westminster Hospital.]

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on May 25th:—

Pocock, Alfred Geo. Clarke, Coventry Park, Streatham.
Seon, Greville Ewing, Hamilton, Bermudas.
Thomas, John Henry, Tenby, South Wales.
Turner, Alfred James, Powerscourt-road, Lower Clapton.
Wise, Charles Henry, Prospect House, Launceston.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Thomas James Cooke Hill, Rupert William Newton, and Everard Woods, St. Bartholomew's Hospital; Charles Sprague Jago, Guy's Hospital; Frederick William Harris, University College.

STEPS are being taken to establish a Cottage Hospital at Hawick.

THE new Eden Hospital for Women and Children was formally opened last month at Calcutta by the Lieutenant Governor of Bengal.

MR. WILLIAM RICHARDSON, of the firm of Messrs. Platt Brothers and Co., has offered to the Board of Governors of the Oldham Infirmary to place an additional ward on the north side of the infirmary. The gift will be equal to about £3000.

A SUMMER theatre in Berlin is reported to have been closed by the police, on the ground of its insufficient protection against the chances and consequences of fire. When will authorities in London exhibit a like energy on behalf of playgoers?

A CASE was heard at Marylebone Police Court on Wednesday, on a summons granted on the application of the Medical Alliance Association, against a person alleged to be practising dentistry without being registered under the Dentists Act. The summons was adjourned for a month.

SANITARY ASSURANCE.—A public meeting is to be held at the Society of Arts, Adelphi, on Monday evening, June 12th, under the auspices of the Sanitary Assurance Association, of 5, Argyll-place, W., when Sir Joseph Fayrer, K.C.S.I., F.R.S., will preside, and Mr. H. Rutherfurd, Barrister-at-Law, will deliver an address on "Sanitary Assurance from a Householder's Point of View."

SLAUGHTER-HOUSE REFORM.—At a meeting of the council of the Society for the reform of Slaughter-houses, the President, Dr. Richardson, F.R.S., in the chair, a draft report on the inspection of public and private slaughter-houses in London and the provinces, by Messrs F. Talfourd Chater and H.F. Lester, was submitted, and it was decided to call a public meeting of the Society to receive the report. A communication was read from Mr. Kennett of Petersfield, intimating that he would give 200 guineas to the Society towards the construction of a model abattoir, if in the course of two months four other persons would contribute the same amount.

THE VOLUNTEER AMBULANCE DEPARTMENT.—The interest among the Volunteers in ambulance work seems unabated. Two classes, instructed by Surgeon-Major Baines, M.D., 1st Middlesex Engineers Volunteers, were officially inspected on Thursday, May 25th, at the parade ground in Birdcage Walk. The official inspecting officer, Surgeon-Major Don, M.D., A.M.D., witnessed the drill of the company and its stretcher exercise, and examined the members on various points connected with the treatment (first aid) of the wounded on the field. At the conclusion of the inspection he complimented the company and its instructor on the efficiency evinced and the steadiness and correctness of the drill as authorised by the red books of the service. Another ambulance class for Volunteers will commence next month at the Guildhall.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—The thirty-third annual report of this hospital, just published, states the number of patients relieved during the past year as 13,721, against 12,976 in 1880. During 1881 the average daily number of in-patients was 114; cost per head £4 2*s.* 2*d.*; cost per bed occupied £50 1*s.* 1*d.* Average stay in hospital 33⅓ days; cost per out-patient 1*s.* 10*d.* The ordinary receipts for the year were £6873 10*s.* 4*d.*, and the ordinary expenditure was £6705 15*s.* 8*d.* The income of the year, as compared with the previous year, shows, however, a falling off under the heads of subscriptions, extra tickets, donations, Hospital Sunday collections, amounting in the aggregate to £174. One subscriber's ticket at half a guinea will now secure the immediate admission as an in-patient of any case which the physician or surgeon at his discretion may consider fitting. Formerly it was necessary to obtain six tickets. Important structural alterations have been accomplished: the entire drainage system has been thoroughly examined, all disused drains have been carefully removed, and new sinks, closets, and other appliances of the latest improvements have been supplied.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest.*

APPLETON, Mr. HARRY, has been appointed Assistant House-Physician to Charing-cross Hospital.

BAKER, WISTON, M.D., C.M.Toronto, L.R.C.S.Ed., L.R.C.P.Ed., has been appointed Assistant Medical Officer at Fiji.

BREDON, ALEX. M., has been appointed Medical Officer to the Cheriton Fitzpaine District of the Crediton Union.

COOPER, G. F., M.R.C.S., L.R.C.P., has been appointed Non-resident House-Physician to St. Thomas's Hospital.

DUNCAN, W. A., M.D. &c., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

FERGUS, A. FREELAND, M.B., C.M., has been appointed Assistant-Surgeon to the Glasgow Ophthalmic Institution.

FISHER, THOMAS, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for Garstang Rural Sanitary District, vice Irving.

HAIG-BROWN, C. W., M.R.C.S., L.S.A.Lond., has been appointed Assistant House-Physician to St. Thomas's Hospital.

HETHERINGTON, GEO. HAYNES, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been appointed Honorary Surgeon to the East Suffolk Hospital, vice Barret, resigned.

HUMPHRY, G. MURRAY, M.D.Cantab., F.R.C.S.E., has been appointed Senior Honorary Consulting Surgeon to the Eastern Counties Asylum for Idiots.

KEIR, WILLIAM INGRAM, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health for the Melksham Urban Sanitary District.

LYSTER, CECIL R.C., M.R.C.S., has been appointed Resident Accoucheur to Charing-cross Hospital.

MACBRYAN, HENRY C., L.R.C.P.Ed. (late Assistant Medical Officer, South Yorkshire Asylum, Wadsley, Sheffield), has been appointed Assistant Medical Officer to the Staffordshire County Asylum, Burntwood, Lichfield.

MORRIS, J. M., M.R.C.S., has been appointed Medical Officer to the Llannon District of the Llanelly Union.

NASH, WILLIAM GUNNER, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for the Daventry Rural Sanitary District, vice Haviland, resigned.

PITTARD, MARMADUKE, M.R.C.S., has been appointed House-Surgeon to Charing-cross Hospital.

WELLS, A. E., M.R.C.S., L.R.C.P., has been appointed Resident Accoucheur to St. Thomas's Hospital.

WIGAN, CHARLES A., L.S.A.Lond., has been appointed House-Physician to Charing-cross Hospital.

WYBORN, S. B., L.S.A.Lond., has been appointed Assistant House-Surgeon to Charing-cross Hospital.

Births, Marriages, and Deaths.

BIRTHS.

ARCHER.—On the 18th ult., at North Lodge, Royston, the wife of Dr. H. R. Archer, of a daughter.

CANE.—On the 23rd ult., at the Minster Precincts, Peterborough, the wife of L. Cane, M.D., of a son.

CONSTANT.—On the 25th ult., at Ferndale-park, Tunbridge-Wells, the wife of Brigade-Surgeon F. G. Constant, M.D., late Bengal Medical Service, of a daughter.

COOK.—On the 25th ult., the wife of Augustus Henry Cook, M.R.C.S., of Denning-road, Hampstead, of a son.

SCORESBY-JACKSON.—On the 20th ult., at St. Hilda's, Walthamstow, the wife of T. Scoresby-Jackson, M.D. &c., of a son.

TEALE.—On the 25th ult., at 2, Belvoir-terrace, Scarborough, the wife of John W. Teale, F.R.C.S., of a son.

MARRIAGES.

BOUSFIELD—HENMAN.—On the 27th ult., at the Parish Church, Islip, Edward C. Bousfield, L.R.C.P.Lond., of Wellesley House, Ashley-road, Bristol, second son of R. T. Bousfield, of Bedford, to Clara, youngest daughter of the late David Henman, of The Grange, Bromham, Beds.

PULLEN-BURRY—ANWYL.—On the 17th ult., at St. Mary's, Balham, Henry Burry Pullen-Burry, L.R.C.P.Lond., M.R.C.S., of Baldock, Herts, to Rose, second daughter of Thomas Anwyl, of Devonshire-road, Balham.

DEATHS.

BACON.—On the 25th ult., after a few days' illness, Theophilus Bacon, M.D., M.Ch.Q.U.I. (eldest son of the Rev. J. H. Bacon, Rector of Great Gonerby, Grantham), House-Surgeon to the Grimsby and District Hospital, aged 27.

COX.—On the 28th ult., at Crewkerne, Somersetshire, Albert George Cox, M.R.C.S., aged 44.

PEACOCK.—On the 31st ult., suddenly, Thomas Bevill Peacock, M.D., F.R.C.P.

WHITELEY.—On the 20th ult., at Bath, Richard Hamer Whiteley, L.R.C.P.Ed., L.R.C.S.Ed., eldest son of Richard Whiteley, of Quebec House, Wakefield.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, June 1st, 1882.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
May 26	29·76	S.W.	69	55	111	67	50	·24	Cloudy
,, 27	29·99	W.	63	57	101	68	51	..	Cloudy
,, 28	30·19	W.	62	58	108	73	57	..	Cloudy
,, 29	30·31	N.W.	65	59	121	75	40	..	Bright
,, 30	30·29	N.E.	63	54	116	73	52	..	Bright
,, 31	30·27	E.	56	52	120	71	47	..	Cloudy
June 1	30·31	E.	55	50	114	65	44	..	Cloudy

Medical Diary for the ensuing Week.

Monday, June 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. Gerald Francis Yeo, "On the Relation of Experimental Physiology to Practical Medicine."

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

Tuesday, June 6.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ROYAL INSTITUTION.—3 P.M. Professor A. Gamgee, "On Digestion."

Wednesday, June 7.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. Gerald Francis Yeo, "On the Relation of Experimental Physiology to Practical Medicine."

EPIDEMIOLOGICAL SOCIETY OF LONDON.—8 P.M. Annual Meeting.—Election of Office Bearers for the ensuing year.—Reports from the Council:—A General Report on the State of the Society during the Session 1881–82; a Report recommending an Alteration in the Laws of the Society.—Dr. Arthur Ransome, "On the Form of an Epidemic Wave, and its Probable Cause."

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Mr. Alban Doran and Dr. Hopkins Walters.—Adjourned discussion on Dr. J. Williams's paper "On the Natural History of Dysmenorrhœa."—Dr. F. H. Champneys, "On an Obliquely contracted Pelvis of Unilateral Synostosis."—Dr. G. E. Herman, "On the Relation of Backward Displacements of the Uterus to Dysmenorrhœa."

Thursday, June 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

ROYAL INSTITUTION.—3 P.M. Professor Dewar, "On the Metals."

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8½ P.M. Additional Meeting for the Discussion upon Sclerotomy.—Papers on Sclerotomy by Mr. Higgens, Mr. Spencer Watson, Mr. Bader, and Mr. J. B. Story (Dublin).—Living Specimens as usual at 8 o'clock.

Friday, June 9.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor Burdon Sanderson "On the Excitability of Plants."

Saturday, June 10.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Professor D. Masson, "On Poetry and its Literary Forms."

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

MEMORIAL BRASS TO SURGEON LANDON, A.M.D., AT ST. BARTHOLOMEW'S HOSPITAL.

THE following subscriptions, in addition to those acknowledged in THE LANCET of Oct. 22nd, 1881, have been received:—

H. B. Boulter, Esq., Richmond..	£0 10 6
F. B. Brodribb, Esq., Colne, Lanc.	0 10 6
S. S. Burn, Esq., M.B., Richmond	0 10 6
F. W. Evans, Esq., M.D., Cardiff	0 10 6
V. D. Harris, Esq., M.D., London	0 10 6
W. L. Heath, Esq., London	0 10 6
G. R. Howat, Esq., London	0 10 6
Captain Lovegrove, Blackheath	0 10 6
S. Lovegrove, Esq., Blackheath	0 10 6
J. F. C. Macready, Esq.	0 10 6
G. S. A. Ranking, Esq., M.B., India	0 10 6
T. B. Scott, Esq., Bournemouth	0 10 6
W. H. P. Sheehy, Esq., London	0 10 6
Jas. Shuter, Esq., M.B., London	0 10 6
F. W. Strugnell, Esq., London	0 10 6
Albert Venn, Esq., M.D., London	0 10 6
T. G. Alderton, Esq., Hammersmith	0 10 0
H. J. Hott, Esq., Bromley	0 5 0
W. Outhwaite, Esq., London	0 5 0
W. A. Sykes, Esq., London	0 5 0

C. E. HARRISON, M.B., JOSEPH MILLS, NORMAN MOORE, M.D., W. E. STEAVENSON, M.B.

May 30th, 1882.

DRAINAGE OF BRIGHTON.

A CORRESPONDENT writes on this subject as follows:—

"I sincerely trust that you will not allow the subject of the dangerous condition of Brighton as regards the ventilation of the sewers to drop. The whiffs of sewer-gas which constantly assail one are most offensive and injurious. This state of things arises from the objectionable practice of having open gratings in the middle of the roads and streets as ventilators. The whole matter of sewer ventilation has been most grossly mismanaged from the first, and is now so bad that the old system of separate cesspools would be preferable. Some of the gratings are only about fifty yards apart along the Western-road. There is also one in Clarence-gardens, not twenty yards from the Western-road; another at the top of West-street, between that street and Queen-square; and another near the top of Russell-street. I complain of these especially as they come daily under my personal observation; doubtless there are in many other parts of the town equally objectionable spots. The officials will not move in the matter until compelled to do so by the pressure of public opinion, or by the absence of visitors, of whom there has been deservedly a great falling off during the last two or three years. The first attempt at ventilating the sewer was made by erecting some eight or ten wooden round houses on the beach, between Brill's baths and the bottom of Waterloo-street. They were painted black in order to represent the fishermen's net houses. The gas escaped through openings near the top, which was as near as possible on the same level as the seats on the esplanade, so that when the wind blew from a southerly quarter the invalids on the seats had the full benefit of the gas. The next step taken was the present highly dangerous system of open gratings in the road."

Mr. George White.—We are not aware of such lessons being given in London.

One Anxious to Know.—Smoking has long been accused of causing cancer of the lips and tongue. It is very probable that anything which can cause chronic irritation or soreness of these parts may lead to cancer.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions in Physiology submitted to the candidates on May 19th, when they were required to answer at least three out of the four questions, between 11 and 2 o'clock:—

1. Give approximately in kind and amount the ingesta and egesta of a healthy man for a period of twenty-four hours. Assuming the amount of the ingesta to remain constant, in what manner would the egesta be modified by hard work?
2. Describe and explain Scheiner's experiment. What points in physiological optics may be demonstrated by this experiment?
3. Describe the pulse-wave, and the methods of investigating it. Explain the mode of action of the chief influences which modify its characters. How may its velocity and length be determined?
4. What are the principal metabolic changes which give rise to the generation of heat, and in what parts of the body do they chiefly occur?

The following were the questions in Anatomy, time from 3 to 6 o'clock:—

1. Describe the various forms of the human skull. What methods have been adopted for the estimation of differences in form and size?
2. Describe the veins in the cavity of the thorax. Explain their arrangement by their developmental history.
3. Describe the manner in which the bones of the pelvis are ossified. Point out the distinctive peculiarities of the pelvis at birth, and the changes in shape which it undergoes prior to its complete development. Contrast the well-formed human pelvis with that of the quadrumana.
4. The skull-cap and brain having been removed, give the dissection required to expose the nasal nerve and its branches throughout their course.

MEDICAL EXAMINATION OF RECRUITS.

F. F. J.—Our correspondent should write to the officer in question pointing out that as the recruit was brought to him by an authorised recruiter, he considered it his duty to examine, as otherwise he would have laid himself open to the charge of wilfully obstructing the public service. If a special authority is necessary before a medical man can examine a recruit—of which our correspondent has now heard for the first time—the blame of disregarding the rule clearly lies with the person bringing the recruit, and not with the practitioner who, at the request of an authorised official, examines him. On the principle of "*qui facit per alium facit per se*," the adjutant himself is to blame, as it is clearly his duty to see that his *employés* know their instructions and obey them.

Resident Physician.—Medical officers of public hospitals and infirmaries, whether supported by endowments or by voluntary subscriptions, are exempted from the operation of the Act.

Viator asks if any of our readers can inform him of the proportion of deaths from ovariotomy and paracentesis.

Mr. P. Colquhoun.—Thanks. We were already in possession of the extract.

One Interested.—Too late for this week.

"THE NEW REGULATION AT THE ROYAL COLLEGE OF SURGEONS."

To the Editor of THE LANCET.

SIR,—In your issue of the 20th ult. there is a letter by "M.R.C.S." under the above heading, a portion of which alludes to the examinations at the College of Surgeons in somewhat deprecatory terms. In justice to the examiners, I wish to express my own and the general opinion of their fairness and straightforwardness. "M.R.C.S." refers to "tips." It is certainly possible that examiners may have ideas of their own, and if by chance a candidate should be asked a question in reference to some pet theory of those gentlemen (I presume by a "tip" the writer means a theory of the examiners, for catch questions are not asked, at least at the Membership Examination, otherwise I am at a loss to know what he means by a "tip"), I think I shall not be wrong in stating that it will not go against a "sound man" one whit if he plead ignorance, but he will probably be informed of something he did not know before, and will please his examiner for his candour. With regard to the "ignorant" getting through, I must confess I never knew of such an occurrence amongst friends of mine, and I believe it to be an absolute impossibility. A man must possess a certain standard amount of sound knowledge to pass. In my own experience both the First and Second College Examinations consist of such questions as are asked every day by the teachers of any medical school, and do not consist of "tips." The examiners themselves are courteous and gentlemanly, and their object is not with "tips to baffle sound men and give a loophole for the ignorant;" but I have a more charitable view of them, and can assert from experience that they are ready to help a man out of a difficulty. Finally, as proof of the fairness of the examinations, I have actually heard men state that they enjoyed their chat with the examiners.

I am, Sir, yours truly,

May 23rd, 1882. IMPARTIAL.

THE VALUE OF PURE WATER IN INDIA.

DR. M. C. FURNELL, Sanitary Commissioner for Madras, recently delivered a lecture on "Water and its effects on health," in which he bore the following striking testimony to the influence which the supply of pure water to the town of Madras has exercised in diminishing the prevalence of cholera:—"Years ago when cholera visited Southern India, Madras was one of its favourite halting places. It numbered here its victims by thousands. This year, although it was the second place in point of time visited, it found its old quarters not so congenial, and passed on to other places. It came again and again—the traffic with Madras from surrounding towns is, of course, so great—but it never took firm root; and the reason I take it is this: the people, at least the mass of the people, now do not drink ordinary tank water, but use Red Hills water, and this is so laid on that although I see men washing themselves often at the taps, the water cannot run back again to contaminate the rest."

Mr. C. Knox Shaw.—1. Messrs. Robbins, of 147, Oxford-street, W., would be most likely to supply the pure methylic alcohol.—2. Junker's inhaler, by Krohne and Sesemann, Duke-street, Manchester-square, W.

A Barrister.—A practitioner who is F.R.C.P.E. is not bound to put E. after his name, though it would be better if he did. The prefix mentioned by our correspondent is not justifiable.

H. B. (Bewdley).—There is no novelty in the suggestion.

D. Rogerson Hamilton, M.B., C.M.—It is essentially a question of contract and of details, of which no information is given us by our correspondent.

Mr. Cooney.—The second date should have been the 28th, not the 25th.

MATERNITY CHARITIES.

To the Editor of THE LANCET.

SIR,—It is only after considerable hesitation and with great reluctance that I addressed you on this subject. Had not some figures in an article in your journal of April 29th pointed, as I think, unmistakably to a recently published pamphlet of mine, I should not have felt myself called upon in any way to notice the remarkable article above mentioned. The writer expresses himself somewhat contemptuously in regard to the figures put forward in my pamphlet, and proceeds to show that they cannot possibly be correct, his ground for believing them to be incorrect being that certain distinguished obstetricians met with less favourable results. Further, to strengthen his position and weaken mine, he brings forward the case of Tarnier, who met with one death in 322 cases of labour, who, the writer thinks, stands convicted of a false statement, because another man in the "small" early part of another year met with one death in every sixty cases from puerperal fever alone. If the writer thinks that Danyan's statement of facts, being true, really proves that Tarnier's statement was false, let him think so. To me the two statements stand side by side, but one cannot be made to prove anything regarding the other. He further quotes the statistics of the Rotunda Hospital as showing that hospital mortality may be as low as out-door maternity puerperal mortality. One of his statements is to the effect that in Sinclair and Johnston's mastership of the Rotunda there were 13,748 cases of labour, and 163 maternal deaths, being a mortality of one in 84. Now, on referring to the published reports of the above hospital, I find that from the year 1869 to 1875 inclusive (Johnston's time), there were 8092 cases, thus leaving 5656 cases for Sinclair's period of office. There were out of Johnston's 8092 cases 109 deaths, or one in 47 and a fraction. This would leave for Sinclair 5656 cases, not only no deaths at all, but life put into six women. It is best, however, to leave it to the writer of the article to explain the mystery. In the year 1877 Dr. Atthill had in the same hospital 1132 cases, with 13 maternal deaths—one in 87. On this he remarks the proportionate number of deaths was "surprisingly small"—lower than it had been for the last twenty years. How this tallies with the statement that during seven years the death-rate was one in 101, I shall not attempt to explain. Nothing in the article in question proves that my figures are incorrect, they merely show how rarely hospital results can compare favourably with those of out-door maternity charities. Spiegelberg's and Goodell's results show, however, what may be met with in obstetric practice if septic and infectious diseases can be avoided, but they are unfortunately exceptions to the general rule, the rule being that sooner or later such diseases are likely to break out, and then the result is disastrous.

It is necessary that the writer of the article should enlarge his ideas and accept the possibility of better results being obtained in out-door maternity charities than he at present thinks possible. To show that he places too high the maternal mortality of some out-door maternal charities, I will now give some statistics from one or two more of such institutions, promising that I give them as I received them, that I am not responsible for their absolute accuracy, but that I believe them to be substantially correct. From the reports of the Royal Maternity Charity, "carefully collected by the secretary," it appears that in the years from 1878 to 1881 inclusive, 13,515 cases were attended, with 45 deaths of mothers—one in 300. At St. Mary's Hospital, Manchester—almost altogether an out-door maternity charity—in the years 1878, 1879, and 1881 there were 7621 cases and 20 maternal deaths, or one in 381. In Newcastle-on-Tyne—nearly altogether an out-door charity, there being only about twenty cases of labour per annum in the hospital—there were in the years 1879 to 1881 inclusive 1289 cases, and only two deaths. If my figures as given here and in the pamphlet do not suit the writer of the article, I would suggest that the proper way to show their inaccuracy is to investigate the facts and discover the error, as I think I have done in one or two instances in his figures, and the method at present adopted is no proof whatever.

With regard to his denunciation of special hospitals, I would like to say that it would be interesting and conducive to professional morality if he would particularise the special institutions he had in his eye when he penned his sentences, as thereby the sinners might be converted, and others of us might be prevented from falling into a like error.

I am, Sir, yours obediently,
J. E. BURTON, L.R.C.P. Lond.,
Medical Officer to the Liverpool Ladies' Charity and Lying-in Hospital.

Liverpool, May 22rd, 1882.

*** We refer our correspondent to page 13 of a book entitled "Practical Midwifery," by E. B. Sinclair, A.B., and George Johnston, M.D., London and Dublin, 1858. There are to be found the statistics of the Rotunda Hospital in Sinclair and Johnston's time, quoted by us and questioned by him. Sinclair was never master of the Rotunda. Were the writer to make himself conversant with the material already collected for forming an opinion on mortality in childbed in outside hospitals, we doubt not that he would arrive at some valuable conclusions.—ED. L.

BORO-GLYCERIDE.

To the Editor of THE LANCET.

SIR,—Mr. Barwell's remarks on the use of "boro-glyceride" in operative surgery, which appeared in THE LANCET of the 13th ult., induced me to try it as an injection in a case of chronic cystitis, which has been under my care for many months past: an old gentleman, with a much enlarged prostate gland, residual urine two and three ounces, the last two drachms being thick, muco-purulent, and offensive, daily catheterism required. Weak nitric and carbolic acid lotions did not improve matters. The borax and glycerine solution recommended by Sir Henry Thompson gave the best results, but the use of the boro-glyceride daily for ten days has been most efficacious, reducing the muco-purulent discharge to almost nothing, and entirely removing the offensive smell which, as usual, accompanies such states of the bladder. One ounce and a half of the boro-glyceride, dissolved in six ounces of warm water, makes the lotion; a sixth part of this, added to half a pint of water, at the time of washing out the bladder, is the strength I have employed. Nearly half an ounce of the lotion is left in the bladder at the close of each injection. A lotion of the same strength has answered well in cleansing the sinuses in a case of hip disease.

I am, Sir, yours truly,
Windsor, May 28th, 1882. WILLIAM BROWN HOLDERNESS.

THE UNBREAKABLE HYPODERMIC SYRINGE.

To the Editor of THE LANCET.

SIR,—With reference to a letter which appeared in THE LANCET of May 20th, we beg to state the plan of screwing the mount on to the glass barrel has been adopted by us for some years, in verification of which we refer you to your own journal for July 20th, 1878. After describing our new patent hypodermic syringe, amongst other improvements, you say "and in the mounts being screwed on to the glass, &c." We fail to see how Messrs. Nicholls can have the slightest claim to an invention of which the principle involved is simply a copy of our patent hypodermic syringes, which has not only been favourably noticed by all the leading journals, but has appeared and been described in every edition of our catalogues since 1878. We trust you will excuse our trespassing on your valuable space, but, in justification to ourselves, are compelled to do so.

We remain, Sir, your obedient servants,
London, May 25th, 1882. ARNOLD & SONS.

X. Y. Z., whose letter on the prospects of medical practice in the Australian colonies appeared in our impression of May 13th, may obtain the information he desires by corresponding with Dr. James Gardner, Trinity-street, Bungay, Suffolk.

H. S. H.—Mr. Burdett's book or Mr. Napper's pamphlet.

J. G. B.—The coroner doubtless acted within his right in refusing the fee.

Mrs. A. P.—The cost must be a matter of arrangement.

VENTILATION OF SEWERS.

To the Editor of THE LANCET.

SIR,—In your closing remarks in your first leader on Sewerage this week you say you will soon return to the subject. Will you allow me to ask you to refer to THE LANCET of March 8th, 1873, for an account of a system of sewer ventilation, which I hope you will not overlook in your next article, for I believe it to be practicable, efficient, and cheap, especially in manufacturing towns. I am sure you will pardon me in drawing your attention to this matter. Every word of the present article I can endorse, and have striven for years to carry out.

I am, Sir, yours truly,
Halifax, May 28th, 1882. D. AINLEY.

THE INCUBATION OF VARICELLA.

To the Editor of THE LANCET.

SIR,—The incubation of chicken-pox, if of little moment to most practitioners, is of interest where schools are concerned; and as it has been altogether omitted by many authors, is perhaps worth placing on record when it can be done with precision. West does not mention it in his account of varicella; nor does Watson. Hebra does not appear to have believed in varicella at all, for there is nothing in his work on skin diseases, though he gives ample space to the other exanthems. He denied any essential difference between the contagion of variola and varicella, having seen formidable outbreaks of the graver malady produced by a solitary example of the lighter and so-called distinct disease. Tanner gives four days; Trousseau fifteen to twenty-nine days.

On April 27th a boy was sent to a boarding school from a home where all the other children (numbering eight) had had varicella; as he showed no sign of it, his father (a medical man) thought he might with safety associate with his fellows. On the evening of his arrival he felt chilly, and next morning a dense crop of eruption appeared, and he was at once isolated and sent home again on May 2nd. He had slept that night in a dormitory with ten other boys, three of whom subsequently had it.

On April 28th another boy, E. W——, aged eleven, returned to school, after the isolation of the first boy. On the 30th, two days later, he was sent home, as he lived within a few hundred yards, with a commencing eruption on his chest. This turned out to be scarlatina of a mild type, accompanied by very slight throat trouble. He had come back to school from a town where scarlet fever was rife around them. Desquamation commenced about the sixth day and proceeded steadily till May 13th, having then reached the wrists and ankles, when another eruption appeared of considerable amount, soon becoming vesicular, and accompanied by evening exacerbations of fever of some intensity; on the 16th 102·2°, 17th 102·4°, 18th 104°, 19th 99·9°, when defervescence took place. This was a smart attack of varicella, and of longer duration than I have previously witnessed. On the ninth day, when the little black ink-like spots on the face showed where former crops had ripened, there were still complete opalescent vesicles on the wrists, which had been protected by cotton gloves; and there must have been a succession of four or five crops of vesicles.

Six other boys at school developed the rash of chicken-pox a day later—viz., May 14th. These were all mild cases except one. That is, twelve days after the original boy had left the house, and sixteen since he slept in the dormitory, whilst the boy E. W—— developed it on the fourteenth day after leaving school (during peeling from scarlet fever).

The period of incubation of varicella may therefore safely be put down as not less than a fortnight; and quarantine for a boy returning to school from an infected home should not be less than three weeks.

I am, Sir, yours truly,

Spondon, May 23rd, 1882. BENJAMIN WALKER, L.R.C.P.Ed.

MORTALITY STATISTICS IN LARGE AND SMALL HOSPITALS.

To the Editor of THE LANCET.

SIR,—In a leading article on the above subject, which appeared in THE LANCET of May 27th, the writer states, with justice, that it was a serious omission in my paper, read before the Statistical Society, not to state the period over which the respective statistics extended. This blot was noticed in the discussion which followed, and has been rectified in the copy I am preparing for publication. THE LANCET is, however, so widely read that I desire to state for the information of its numerous readers—1. That the period comprised by the statistics is from the beginning of 1860 to the end of 1878. 2. That the sixty-eight hospitals all replied to my circular, but none had operations of the classes dealt with in the paper.—I am, Sir, yours, &c.,

Gloucester-road, Regent's-park, N.W., May 31st, 1882. HENRY C. BURDETT.

ERRATA.—In Mr. Dunnett Spanton's letter, published last week, by a printer's error the number of Rothmund's operations was given as 250, instead of 35.—In the article which appeared in our issue of the 20th ult., under the heading of "Prosecution for False Certification," p. 844, in the eighth line of the third paragraph, read 28th March, not 25th March.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. Flint, Buxton; Mr. Meadows, Hastings; Mr. Heap, London; Mr. Cooney, London; Mr. C. S. Grant, Droitwich; Mr. Cripps Lawrence, London; Mr. F. Darwin, Down; Dr. Hume, Newcastle-on-Tyne; Mr. Gross, Walworth; Mr. M'Laurin, London; Mr. Read; Mr. R. Rawlinson, London; Mr. Crespi, Wimborne; Mr. Grosswell, Louth; Mr. Lacy; Mr. Hamilton, Haddington; Mr. Simeon Snell, Sheffield; Mr. Ainley, Halifax; Mrs. Bromley; Dr. Bantock, London; Mr. Watkins, Boshof; Mr. O. Pritchard, London; Mr. Parnell, Calcutta; Dr. Thorowgood, London; Mr. Pullé, Aberdeen; Mr. J. R. Clayton, London; Mr. White, London; Dr. Reginald Thompson, London; Mr. Rivington, London; Dr. Gibson, Newcastle-on-Tyne; Mr. Hammond, Brighton; Mr. Jack, South Kensington; Dr. Galabin, London; Mr. Hyde, Blackpool; Mr. Broadhurst, Grimsby; Mr. Unsworth, Liverpool; Mrs. Elliot, Ottery St. Mary; Mr. Theobald, Leicester; Mr. Perks, Portsea; Mr. Tawa, Crewe; Dr. Steavenson, London; Messrs. Barrow and Co., London; Dr. Cranie, Dublin; Mr. Casson, Bath; Mr. Carter, London; Mr. Stilliard, Birmingham; Mr. Hunt, Hull; Mr. Elliott, Carlisle; Dr. Duncan, London; Miss Bray, Guildford; Dr. Major, Wakefield; Dr. Finch, Salisbury; Mr. Bradley, Guisborough; Dr. Alexander, Bradford; Mr. Ambler, Leeds; Dr. Menzies, Paris; Mr. Burdett, London; Dr. Hughes Bennett, London; Mr. Edmunds, London; Mr. E. W. Wallis, London; Dr. Moir, Fort William; Mr. Charles Pope, South Shields; Mr. Edes, Dover; J. G. B.; Anxious; W. T.; M.D.; Indignant; Resident Physician; W.; A Barrister; One Anxious to Know; H., Bladley; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Kinder, Leicester; Mr. Roberts, Abergele; Mr. Backs, Tunbridge Wells; Mr. Canning, London; Mr. Essex, Pontypool; Mr. Cookson, Totnes; Mr. Kerr, Glasgow; Miss Roper, Maldon; Mr. Taylor, Stamford-hill; Rev. J. H. Bacon, Grantham; Mr. Robinson, Essingwold; Mr. Jones, Wandsworth; Mr. Robinson, Broughshaw; Messrs. Drape, Stratford; Mr. Wilmshurst, Harper-town; Mr. Conway, Carlisle; Messrs. Smith and Son, Dublin; Messrs. Watkinson and Crust, Spalding; Mr. Baker, Mere; Mr. Grabham, Pendlebury; Mr. Beman, Newton-le-Willows; Mr. Godfrey, Northampton; Dr. Richards, Ross; Mr. Stewart, Larbert; Mr. King, Broadstairs; Misses Wakefield, Camelford; Messrs. Gurden and Co.; Mr. Hall, Newbury; Mr. Owen; Mr. Naggs, Bournemouth; Miss Hogston, Peterhead; Dr. Baldwin, Bradford; Mr. Ryan, London; Messrs. Hodgson Brothers, Peckham; Dr. March, Bradford; Mr. Fosbrooke, Birmingham; Dr. Redwood, Rhymney; Dr. Collier, Lincoln; Mrs. Maltby, Peckham; G. G., Milford-haven; F. C. H., Exmouth; Forceps; Medicus, Seaford; W.; Principal, Hammersmith; Surgeon, Liverpool; L. R. C. P.; C. M., Holloway; M. D. A.; M.R.C.S., Liverpool; M. B, Buxton; M. S. D., Finsbury; M.D.; M. H., Stepney; Surgeon, Hackney; Omega, Hanley; L. O.; Edinensis, Edinburgh; Chemicus; F.; Medicus, Shrewsbury; W. P., Leeds; Medicus, Minchinhampton; Medicus, Manchester; Medicus, Gloucester; Medicus, Callington; M. M. R., Dovercourt; House-Surgeon, Burton-on-Trent; S. M., Newcastle-on-Tyne; &c., &c.

Anglican Daily Times, Church Standard, North Middlesex Chronicle, Bootle Times, Nottingham Daily Guardian, Melbourne Argus, Hawick Express, Hampstead and Highgate Express, Vaccination Inquirer, Walthamstow Guardian, &c., have been received.

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